



# Open Source Used In AppDynamics\_Cloud\_Metric\_Aggreg ation\_Mapper\_Service\_Levitate 22.11.0-453

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\*/

Found in path(s):

\* /opt/cola/permits/1331474137\_1653511933.527574/0/micronaut-views-core-3-2-0-sources-

```
jar/io/micronaut/views/ViewsFilter.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/ViewsResolver.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/DefaultViewsRendererLocator.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/ViewsModelDecorator.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/DefaultViewsResolver.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/DefaultViewsModelDecorator.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/ViewsRendererKey.java
* /opt/cola/permits/1331474137_1653511933.527574/0/micronaut-views-core-3-2-0-sources-
jar/io/micronaut/views/ViewsRendererLocator.java
```

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From strings/apr\_strnatcmp.c, include/apr\_strings.h:

strnatcmp.c -- Perform 'natural order' comparisons of strings in C.  
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From strings/apr\_snprintf.c:

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\* cvt - IEEE floating point formatting routines.  
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  - Origin: Derived from ASM: a very small and fast Java bytecode manipulation framework, Copyright (c) 2000-2011 INRIA, France Telecom
- Path: compiler/backend/src/org/jetbrains/kotlin/codegen/optimization/temporaryVals/FastStoreLoadAnalyzer.kt
  - License: BSD ([license/third\_party/asm\_license.txt][asm])
  - Origin: Derived from ASM: a very small and fast Java bytecode manipulation framework, Copyright (c) 2000-2011 INRIA, France Telecom
- Path: core/reflection.jvm/src/kotlin.reflect/jvm/internal/pcollections
  - License: MIT ([license/third\_party/pcollections\_LICENSE.txt][pcollections])

- Origin: Derived from PCollections, A Persistent Java Collections Library (<https://pcollections.org/>)
  
- Path: eval4j/src/org/jetbrains/eval4j/interpreterLoop.kt
  - License: BSD ([license/third\_party/asm\_license.txt][asm])
  - Origin: Derived from ASM: a very small and fast Java bytecode manipulation framework, Copyright (c) 2000-2011 INRIA, France Telecom
  
- Path: compiler/backend/src/org/jetbrains/kotlin/codegen/optimization/common/OptimizationBasicInterpreter.java
  - License: BSD ([license/third\_party/asm\_license.txt][asm])
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- Path: js/js.ast
  - License: BSD ([license/third\_party/dart\_LICENSE.txt][dart])
  - Origin: Originally part of the Dart compiler, (c) 2011 the Dart Project Authors,
  
- Path: js/js.inliner/src/org/jetbrains/kotlin/js/inline/FunctionInlineMutator.kt
  - License: BSD ([license/third\_party/dart\_LICENSE.txt][dart])
  - Origin: Originally part of the Dart compiler, (c) 2011 the Dart Project Authors,
  
- Path: js/js.parser/src/com/google
  - License: Netscape Public License 1.1 ([license/third\_party/rhino\_LICENSE.txt][rhino])
  - Origin: Originally part of GWT, (C) 2007-08 Google Inc., distributed under the Apache 2 license. The code is derived from Rhino, (C) 1997-1999 Netscape Communications Corporation, distributed under the Netscape Public License.
  
- Path: js/js.translator/qunit/qunit.js
  - License: MIT ([license/third\_party/qunit\_license.txt][qunit])
  - Origin: QUnit, Copyright (c) 2012 John Resig, Jrn Zaefferer,
  
- Path: libraries/stdlib/src/kotlin/collections
  - License: Apache 2 ([license/third\_party/gwt\_license.txt][gwt])
  - Origin: Derived from GWT, (C) 2007-08 Google Inc.
  
- Path: libraries/stdlib/unsigned/src/kotlin/UnsignedUtils.kt
  - License: Apache 2 ([license/third\_party/guava\_license.txt][guava])
  - Origin: Derived from Guava's UnsignedLongs, (C) 2011 The Guava Authors
  
- Path: libraries/stdlib/jvm/src/kotlin/util/MathJVM.kt
  - License: Boost Software License 1.0 ([license/third\_party/boost\_LICENSE.txt][boost])
  - Origin: Derived from boost special math functions, Copyright Eric Ford & Hubert Holin 2001.
  
- Path: libraries/stdlib/js/src/kotlin/collections
  - License: Apache 2 ([license/third\_party/gwt\_license.txt][gwt])
  - Origin: Derived from GWT, (C) 2007-08 Google Inc.
  
- Path: libraries/stdlib/js-v1/src/js/long.js
  - License: Apache 2 ([license/third\_party/closure-compiler\_LICENSE.txt][closure-compiler])

- Origin: Google Closure Library, Copyright 2009 The Closure Library Authors
  
- Path: libraries/stdlib/js-v1/src/js/polyfills.js
  - License: Boost Software License 1.0 ([license/third\_party/boost\_LICENSE.txt][boost])
  - Origin: Derived from boost special math functions, Copyright Eric Ford & Hubert Holin 2001.
  
- Path: libraries/stdlib/wasm/internal/kotlin/wasm/internal/Number2String.kt
  - License: Apache 2 ([third\_party/assemblyscript\_license.txt][assemblyscript])
  - Origin: Derived from assemblyscript standard library
  
- Path: plugins/lint/android-annotations
  - License: Apache 2 ([license/third\_party/aosp\_license.txt][aosp])
  - Origin: Copyright (C) 2011-15 The Android Open Source Project
  
- Path: plugins/lint/lint-api
  - License: Apache 2 ([license/third\_party/aosp\_license.txt][aosp])
  - Origin: Copyright (C) 2011-15 The Android Open Source Project
  
- Path: plugins/lint/lint-checks
  - License: Apache 2 ([license/third\_party/aosp\_license.txt][aosp])
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- Path: plugins/lint/lint-idea
  - License: Apache 2 ([license/third\_party/aosp\_license.txt][aosp])
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- Path: wasm/ir/src/org/jetbrains/kotlin/wasm/ir/convertors
  - License: MIT ([license/third\_party/asmble\_license.txt][asmble])
  - Origin: Copyright (C) 2018 Chad Retz
  
- Path: compiler/tests-common/tests/org/jetbrains/kotlin/codegen/ir/ComposeLikeGenerationExtension.kt
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  - Origin: Eclipse JDT, Copyright (c) 2011, 2013 Stephan Herrmann and others.
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  - Origin: Bytecode Analysis Framework, Copyright (C) 2005 University of Maryland
- Path: third-party/java8-annotations/org/eclipse
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  - Origin: Eclipse JDT, Copyright (c) 2011, 2013 Stephan Herrmann and others.
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  - License: Apache 2 ([license/third\_party/testdata/rxjava\_license.txt][rxjava])
  - Origin: RxJava, Copyright (c) 2016-present, RxJava Contributors
- Path: third-party/java8-annotations/org/jspecify
  - License: Apache 2 ([license/third\_party/testdata/jspecify\_license.txt][jspecify])
  - Origin: JSpecify, Copyright (C) 2020 The JSpecify Authors
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  - License: MIT ([license/third\_party/testdata/lombok\_license.txt][lombok])
  - Origin: Project Lombok, Copyright (C) 2009-2013 The Project Lombok Authors
- Path: idea/idea-android/tests/org/jetbrains/kotlin/android/AndroidTestBase.java
  - License: Apache 2 ([license/third\_party/aosp\_license.txt][aosp])
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- Path: libraries/tools/kotlin-gradle-plugin-integration-tests/src/test/resources/testProject/allOpenSpring/src/org/springframework/stereotype/Component.java
  - License: Apache 2 ([license/third\_party/testdata/spring\_license.txt][spring])
  - Origin: Spring Framework, Copyright 2002-2007 the original author or authors.
  
- Path: libraries/tools/kotlin-gradle-plugin-integration-tests/src/test/resources/testProject/AndroidDaggerProject
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  - Origin: Dagger, Copyright (C) 2013 Square, Inc.
  
- Path: libraries/tools/kotlin-gradle-plugin-integration-tests/src/test/resources/testProject/kapt2
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- Path: libraries/tools/kotlin-maven-plugin-test/src/it/test-allopen-spring/src/main/java/org/springframework/stereotype/Component.java
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  - License: Apache 2 ([license/third\_party/gradle\_license.txt][gradle])
  - Origin: Gradle, Copyright 2002-2017 Gradle, Inc.
  
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  - License: Eclipse Public License v1.0 ([license/third\_party/testdata/eclipse\_license.txt][eclipse]) and Eclipse Distribution License - v1.0 ([license/third\_party/testdata/eclipse\_distribution\_license.txt][eclipse-distribution])
  - Origin: javax.persistence, Copyright (c) 2008, 2017 Sun Microsystems, Oracle Corporation.
  
- Path: libraries/tools/kotlin-gradle-plugin-integration-tests/src/test/resources/testProject/noArgJpa/src/javax/persistence/Entity.java
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  - Origin: javax.persistence, Copyright (c) 2008, 2017 Sun Microsystems, Oracle Corporation.
  
- Path: libraries/tools/kotlin-gradle-plugin-integration-tests/src/test/resources/testProject/noArgJpa/src/javax/persistence/Embeddable.java
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  - Origin: javax.persistence, Copyright (c) 2008, 2017 Sun Microsystems, Oracle Corporation.

- Path: libraries/tools/kotlin-test-js-runner/karma-kotlin-reporter.js
  - License: MIT ([license/third\_party/karma\_LICENSE.txt](third\_party/karma\_LICENSE.txt) and [license/third\_party/karma-teamcity-reporter\_LICENSE.txt](third\_party/karma-teamcity-reporter\_LICENSE.txt))
  - Origin: Copyright (C) 2011-2019 Google, Inc. and Copyright (C) 2011-2013 Vojta Jna and contributors.
  
- Path: libraries/tools/kotlin-test-js-runner/mocha-kotlin-reporter.js
  - License: MIT ([license/third\_party/mocha-teamcity-reporter\_LICENSE.txt](third\_party/mocha-teamcity-reporter\_LICENSE.txt))
  - Origin: Copyright (c) 2016 Jamie Sherriff
  
- Path: libraries/tools/kotlin-test-js-runner/src/utils.ts
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- Path: libraries/tools/kotlin-test-js-runner/src/teamcity-format.js
  - License: MIT ([license/third\_party/mocha-teamcity-reporter\_LICENSE.txt](third\_party/mocha-teamcity-reporter\_LICENSE.txt) and [license/third\_party/teamcity-service-messages\_LICENSE.txt](third\_party/teamcity-service-messages\_LICENSE.txt))
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  - License: MIT ([license/third\_party/jquery\_license.txt](jquery))
  - Origin: jQuery JavaScript Library v1.6.2, Copyright 2011, John Resig
  
- Path: libraries/examples/browser-example-with-library/src/js/jquery.js
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  - Origin: jQuery JavaScript Library v1.6.2, Copyright 2011, John Resig

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- [asm]: third\_party/asm\_license.txt
- [boost]: third\_party/boost\_LICENSE.txt
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\*/

package tasks

import groovy.util.Node

import groovy.util.XmlParser

import org.gradle.api.DefaultTask

import org.gradle.api.file.RegularFileProperty

import org.gradle.api.provider.Property

import org.gradle.api.tasks.Input

import org.gradle.api.tasks.InputFile

import org.gradle.api.tasks.OutputFile

import org.gradle.api.tasks.TaskAction

import java.util.\*

abstract class WriteCopyrightToFile : DefaultTask() {

    @InputFile

    val path = project.file("\${project.rootDir}/.idea/copyright/apache.xml")

    @get:OutputFile

    abstract val outputFile: RegularFileProperty

    @get:Input

    val commented: Property<Boolean> = project.objects.property(Boolean::class.java).convention(true)

    @TaskAction

    fun write() {

        val file = outputFile.asFile.get()

        file.writeText(if (commented.get()) readCopyrightCommented() else readCopyright())

    }

    private fun readCopyright(): String {

        assert(path.exists()) {

            "File \$path with copyright not found"

```

    }

    val xmlParser = XmlParser()
    val node = xmlParser.parse(path)
    assert(node.attribute("name") == "CopyrightManager") {
        "Format changed occasionally?"
    }

    val copyrightBlock = node.children().filterIsInstance<Node>().single()
    val noticeNode = copyrightBlock.children().filterIsInstance<Node>().single { it.attribute("name") == "notice" }
    return noticeNode.attribute("value").toString().replace("&#36;today.year",
    GregorianCalendar()[Calendar.YEAR].toString())
}

private fun readCopyrightCommented(): String {
    return "/*\n" + readCopyright().prependIndent(" * ") + "\n */"
}
}

```

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zlib.h -- interface of the 'zlib' general purpose compression library  
version 1.2.11, January 15th, 2017

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## 1.5 antlr 4.9.2

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\*/

/\*

This file contains the actual layout of the messages emitted by ANTLR.

This file contains the default format ANTLR uses.

\*/

location(file, line, column) ::= "<file>:<line>:<column>:"

message(id, text) ::= "<id> <text>"

report(location, message, type) ::= "<type><message.id>: <location> <message.text>"

wantsSingleLineMessage() ::= "false"

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/messages/formats/antlr.stg

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```

*/

/** The definitive ANTLR v3 tree grammar to walk/visit ANTLR v4 grammars.
* Parses trees created by ANTLRParser.g.
*
* Rather than have multiple tree grammars, one for each visit, I'm
* creating this generic visitor that knows about context. All of the
* boilerplate pattern recognition is done here. Then, subclasses can
* override the methods they care about. This prevents a lot of the same
* context tracking stuff like "set current alternative for current
* rule node" that is repeated in lots of tree filters.
*/

```

```

tree grammar GrammarTreeVisitor;
options {
language    = Java;
tokenVocab  = ANTLRParser;
ASTLabelType = GrammarAST;
}

```

```

// Include the copyright in this source and also the generated source
@header {
/*
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```

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```

*/
package org.antlr.v4.parse;
import org.antlr.v4.Tool;
import org.antlr.v4.tool.*;
import org.antlr.v4.tool.ast.*;
import java.lang.reflect.InvocationTargetException;
import java.lang.reflect.Method;
}

@members {
public String grammarName;
public GrammarAST currentRuleAST;
public String currentModeName = LexerGrammar.DEFAULT_MODE_NAME;
public String currentRuleName;
public GrammarAST currentOuterAltRoot;
public int currentOuterAltNumber = 1; // 1..n
public int rewriteEBNFLevel = 0;

public GrammarTreeVisitor() { this(null); }

// Should be abstract but can't make gen'd parser abstract;
// subclasses should implement else everything goes to stderr!
public ErrorManager getErrorManager() { return null; }

public void visitGrammar(GrammarAST t) { visit(t, "grammarSpec"); }
public void visit(GrammarAST t, String ruleName) {
    CommonTreeNodeStream nodes = new CommonTreeNodeStream(new GrammarASTAdaptor(), t);
    setTreeNodeStream(nodes);
    try {
        Method m = getClass().getMethod(ruleName);
        m.invoke(this);
    }
    catch (Throwable e) {
        ErrorManager errMgr = getErrorManager();
        if ( e instanceof InvocationTargetException ) {
            e = e.getCause();
        }
        //e.printStackTrace(System.err);
        if ( errMgr==null ) {
            System.err.println("can't find rule "+ruleName+
                " or tree structure error: "+t.toStringTree()
            );
            e.printStackTrace(System.err);
        }
        else errMgr.toolError(ErrorType.INTERNAL_ERROR, e);
    }
}
}

```

```

public void discoverGrammar(GrammarRootAST root, GrammarAST ID) { }
public void finishPrequels(GrammarAST firstPrequel) { }
public void finishGrammar(GrammarRootAST root, GrammarAST ID) { }

public void grammarOption(GrammarAST ID, GrammarAST valueAST) { }
public void ruleOption(GrammarAST ID, GrammarAST valueAST) { }
public void blockOption(GrammarAST ID, GrammarAST valueAST) { }
public void defineToken(GrammarAST ID) { }
public void defineChannel(GrammarAST ID) { }
public void globalNamedAction(GrammarAST scope, GrammarAST ID, ActionAST action) { }
public void importGrammar(GrammarAST label, GrammarAST ID) { }

public void modeDef(GrammarAST m, GrammarAST ID) { }

public void discoverRules(GrammarAST rules) { }
public void finishRules(GrammarAST rule) { }
public void discoverRule(RuleAST rule, GrammarAST ID, List<GrammarAST> modifiers,
    ActionAST arg, ActionAST returns, GrammarAST thrws,
    GrammarAST options, ActionAST locals,
    List<GrammarAST> actions,
    GrammarAST block) { }
public void finishRule(RuleAST rule, GrammarAST ID, GrammarAST block) { }
public void discoverLexerRule(RuleAST rule, GrammarAST ID, List<GrammarAST> modifiers,
    GrammarAST block) { }
public void finishLexerRule(RuleAST rule, GrammarAST ID, GrammarAST block) { }
public void ruleCatch(GrammarAST arg, ActionAST action) { }
public void finallyAction(ActionAST action) { }
public void discoverOuterAlt(AltAST alt) { }
public void finishOuterAlt(AltAST alt) { }
public void discoverAlt(AltAST alt) { }
public void finishAlt(AltAST alt) { }

public void ruleRef(GrammarAST ref, ActionAST arg) { }
public void tokenRef(TerminalAST ref) { }
public void elementOption(GrammarASTWithOptions t, GrammarAST ID, GrammarAST valueAST) { }
public void stringRef(TerminalAST ref) { }
public void wildcardRef(GrammarAST ref) { }
public void actionInAlt(ActionAST action) { }
public void sempredInAlt(PredAST pred) { }
public void label(GrammarAST op, GrammarAST ID, GrammarAST element) { }
public void lexerCallCommand(int outerAltNumber, GrammarAST ID, GrammarAST arg) { }
public void lexerCommand(int outerAltNumber, GrammarAST ID) { }

protected void enterGrammarSpec(GrammarAST tree) { }
protected void exitGrammarSpec(GrammarAST tree) { }

protected void enterPrequelConstructs(GrammarAST tree) { }
protected void exitPrequelConstructs(GrammarAST tree) { }

```

protected void enterPrequelConstruct(GrammarAST tree) { }

protected void exitPrequelConstruct(GrammarAST tree) { }

protected void enterOptionsSpec(GrammarAST tree) { }

protected void exitOptionsSpec(GrammarAST tree) { }

protected void enterOption(GrammarAST tree) { }

protected void exitOption(GrammarAST tree) { }

protected void enterOptionValue(GrammarAST tree) { }

protected void exitOptionValue(GrammarAST tree) { }

protected void enterDelegateGrammars(GrammarAST tree) { }

protected void exitDelegateGrammars(GrammarAST tree) { }

protected void enterDelegateGrammar(GrammarAST tree) { }

protected void exitDelegateGrammar(GrammarAST tree) { }

protected void enterTokensSpec(GrammarAST tree) { }

protected void exitTokensSpec(GrammarAST tree) { }

protected void enterTokenSpec(GrammarAST tree) { }

protected void exitTokenSpec(GrammarAST tree) { }

protected void enterChannelsSpec(GrammarAST tree) { }

protected void exitChannelsSpec(GrammarAST tree) { }

protected void enterChannelSpec(GrammarAST tree) { }

protected void exitChannelSpec(GrammarAST tree) { }

protected void enterAction(GrammarAST tree) { }

protected void exitAction(GrammarAST tree) { }

protected void enterRules(GrammarAST tree) { }

protected void exitRules(GrammarAST tree) { }

protected void enterMode(GrammarAST tree) { }

protected void exitMode(GrammarAST tree) { }

protected void enterLexerRule(GrammarAST tree) { }

protected void exitLexerRule(GrammarAST tree) { }

protected void enterRule(GrammarAST tree) { }

protected void exitRule(GrammarAST tree) { }

protected void enterExceptionGroup(GrammarAST tree) { }

protected void exitExceptionGroup(GrammarAST tree) { }

protected void enterExceptionHandler(GrammarAST tree) { }

protected void exitExceptionHandler(GrammarAST tree) { }

protected void enterFinallyClause(GrammarAST tree) { }

protected void exitFinallyClause(GrammarAST tree) { }

protected void enterLocals(GrammarAST tree) { }

protected void exitLocals(GrammarAST tree) { }

protected void enterRuleReturns(GrammarAST tree) { }

protected void exitRuleReturns(GrammarAST tree) { }

protected void enterThrowsSpec(GrammarAST tree) { }

protected void exitThrowsSpec(GrammarAST tree) { }

protected void enterRuleAction(GrammarAST tree) { }

protected void exitRuleAction(GrammarAST tree) { }

protected void enterRuleModifier(GrammarAST tree) { }

protected void exitRuleModifier(GrammarAST tree) { }

protected void enterLexerRuleBlock(GrammarAST tree) { }

protected void exitLexerRuleBlock(GrammarAST tree) { }

protected void enterRuleBlock(GrammarAST tree) { }

protected void exitRuleBlock(GrammarAST tree) { }

protected void enterLexerOuterAlternative(AltAST tree) { }

protected void exitLexerOuterAlternative(AltAST tree) { }

protected void enterOuterAlternative(AltAST tree) { }

protected void exitOuterAlternative(AltAST tree) { }

protected void enterLexerAlternative(GrammarAST tree) { }

protected void exitLexerAlternative(GrammarAST tree) { }

protected void enterLexerElements(GrammarAST tree) { }

protected void exitLexerElements(GrammarAST tree) { }

protected void enterLexerElement(GrammarAST tree) { }

protected void exitLexerElement(GrammarAST tree) { }

protected void enterLabeledLexerElement(GrammarAST tree) { }

protected void exitLabeledLexerElement(GrammarAST tree) { }

protected void enterLexerBlock(GrammarAST tree) { }

protected void exitLexerBlock(GrammarAST tree) { }

```
protected void enterLexerAtom(GrammarAST tree) { }  
protected void exitLexerAtom(GrammarAST tree) { }
```

```
protected void enterActionElement(GrammarAST tree) { }  
protected void exitActionElement(GrammarAST tree) { }
```

```
protected void enterAlternative(AltAST tree) { }  
protected void exitAlternative(AltAST tree) { }
```

```
protected void enterLexerCommand(GrammarAST tree) { }  
protected void exitLexerCommand(GrammarAST tree) { }
```

```
protected void enterLexerCommandExpr(GrammarAST tree) { }  
protected void exitLexerCommandExpr(GrammarAST tree) { }
```

```
protected void enterElement(GrammarAST tree) { }  
protected void exitElement(GrammarAST tree) { }
```

```
protected void enterAstOperand(GrammarAST tree) { }  
protected void exitAstOperand(GrammarAST tree) { }
```

```
protected void enterLabeledElement(GrammarAST tree) { }  
protected void exitLabeledElement(GrammarAST tree) { }
```

```
protected void enterSubrule(GrammarAST tree) { }  
protected void exitSubrule(GrammarAST tree) { }
```

```
protected void enterLexerSubrule(GrammarAST tree) { }  
protected void exitLexerSubrule(GrammarAST tree) { }
```

```
protected void enterBlockSuffix(GrammarAST tree) { }  
protected void exitBlockSuffix(GrammarAST tree) { }
```

```
protected void enterEbnfSuffix(GrammarAST tree) { }  
protected void exitEbnfSuffix(GrammarAST tree) { }
```

```
protected void enterAtom(GrammarAST tree) { }  
protected void exitAtom(GrammarAST tree) { }
```

```
protected void enterBlockSet(GrammarAST tree) { }  
protected void exitBlockSet(GrammarAST tree) { }
```

```
protected void enterSetElement(GrammarAST tree) { }  
protected void exitSetElement(GrammarAST tree) { }
```

```
protected void enterBlock(GrammarAST tree) { }  
protected void exitBlock(GrammarAST tree) { }
```

```

protected void enterRuleref(GrammarAST tree) { }
protected void exitRuleref(GrammarAST tree) { }

protected void enterRange(GrammarAST tree) { }
protected void exitRange(GrammarAST tree) { }

protected void enterTerminal(GrammarAST tree) { }
protected void exitTerminal(GrammarAST tree) { }

protected void enterElementOptions(GrammarAST tree) { }
protected void exitElementOptions(GrammarAST tree) { }

protected void enterElementOption(GrammarAST tree) { }
protected void exitElementOption(GrammarAST tree) { }

@Override
public void traceIn(String ruleName, int ruleIndex) {
    System.err.println("enter "+ruleName+": "+input.LT(1));
}

@Override
public void traceOut(String ruleName, int ruleIndex) {
    System.err.println("exit "+ruleName+": "+input.LT(1));
}

grammarSpec
@init {
    enterGrammarSpec($start);
}
@after {
    exitGrammarSpec($start);
}
: ^( GRAMMAR ID {grammarName=$ID.text;}
    {discoverGrammar((GrammarRootAST)$GRAMMAR, $ID);}
    prequelConstructs
    {finishPrequels($prequelConstructs.firstOne);}
    rules mode*
    {finishGrammar((GrammarRootAST)$GRAMMAR, $ID);}
)
;

prequelConstructs returns [GrammarAST firstOne=null]
@init {
    enterPrequelConstructs($start);
}
@after {

```

```

exitPrequelConstructs($start);
}
: {$firstOne=$start;} prequelConstruct+
|
;

```

```

prequelConstruct
@init {
enterPrequelConstructs($start);
}
@after {
exitPrequelConstructs($start);
}
: optionsSpec
| delegateGrammars
| tokensSpec
| channelsSpec
| action
;

```

```

optionsSpec
@init {
enterOptionsSpec($start);
}
@after {
exitOptionsSpec($start);
}
: ^(OPTIONS option*)
;

```

```

option
@init {
enterOption($start);
boolean rule = inContext("RULE ...");
boolean block = inContext("BLOCK ...");
}
@after {
exitOption($start);
}
: ^(a=ASSIGN ID v=optionValue)
{
if ( block ) blockOption($ID, $v.start); // most specific first
else if ( rule ) ruleOption($ID, $v.start);
else grammarOption($ID, $v.start);
}
;

```

optionValue returns [String v]

```

@init {
  enterOptionValue($start);
  $v = $start.token.getText();
}
@after {
  exitOptionValue($start);
}
: ID
| STRING_LITERAL
| INT
;

```

delegateGrammars

```

@init {
  enterDelegateGrammars($start);
}
@after {
  exitDelegateGrammars($start);
}
: ^(IMPORT delegateGrammar+)
;

```

delegateGrammar

```

@init {
  enterDelegateGrammar($start);
}
@after {
  exitDelegateGrammar($start);
}
: ^(ASSIGN label=ID id=ID) {importGrammar($label, $id);}
| id=ID {importGrammar(null, $id);}
;

```

tokensSpec

```

@init {
  enterTokensSpec($start);
}
@after {
  exitTokensSpec($start);
}
: ^(TOKENS_SPEC tokenSpec+)
;

```

tokenSpec

```

@init {
  enterTokenSpec($start);
}
@after {

```

```

    exitTokenSpec($start);
}
: ID {defineToken($ID);}
;

channelsSpec
@init {
    enterChannelsSpec($start);
}
@after {
    exitChannelsSpec($start);
}
: ^(CHANNELS channelSpec+)
;

channelSpec
@init {
    enterChannelSpec($start);
}
@after {
    exitChannelSpec($start);
}
: ID {defineChannel($ID);}
;

action
@init {
    enterAction($start);
}
@after {
    exitAction($start);
}
: ^(AT sc=ID? name=ID ACTION) {globalNamedAction($sc, $name, (ActionAST)$ACTION);}
;

rules
@init {
    enterRules($start);
}
@after {
    exitRules($start);
}
: ^(RULES {discoverRules($RULES);} (rule|lexerRule)* {finishRules($RULES);})
;

mode
@init {
    enterMode($start);
}

```

```

}
@after {
    exitMode($start);
}
: ^( MODE ID {currentModeName=$ID.text; modeDef($MODE, $ID);} lexerRule* )
;

lexerRule
@init {
    enterLexerRule($start);
    List<GrammarAST> mods = new ArrayList<GrammarAST>();
    currentOuterAltNumber=0;
}
@after {
    exitLexerRule($start);
}
: ^( RULE TOKEN_REF
    {currentRuleName=$TOKEN_REF.text; currentRuleAST=$RULE;}
    (^ (RULEMODIFIERS m=FRAGMENT {mods.add($m);}))?
    {discoverLexerRule((RuleAST)$RULE, $TOKEN_REF, mods, (GrammarAST)input.LT(1));}
    lexerRuleBlock
    {
        finishLexerRule((RuleAST)$RULE, $TOKEN_REF, $lexerRuleBlock.start);
        currentRuleName=null; currentRuleAST=null;
    }
    )
;

rule
@init {
    enterRule($start);
    List<GrammarAST> mods = new ArrayList<GrammarAST>();
    List<GrammarAST> actions = new ArrayList<GrammarAST>(); // track roots
    currentOuterAltNumber=0;
}
@after {
    exitRule($start);
}
: ^( RULE RULE_REF {currentRuleName=$RULE_REF.text; currentRuleAST=$RULE;}
    (^ (RULEMODIFIERS (m=ruleModifier {mods.add($m.start);}))+)?
    ARG_ACTION?
    ret=ruleReturns?
    thr=throwsSpec?
    loc=locals?
    ( opts=optionsSpec
    | a=ruleAction {actions.add($a.start);}
    )*
    {discoverRule((RuleAST)$RULE, $RULE_REF, mods, (ActionAST)$ARG_ACTION,

```

```

    $ret.start!=null?(ActionAST)$ret.start.getChild(0):null,
    $thr.start, $opts.start,
    $loc.start!=null?(ActionAST)$loc.start.getChild(0):null,
    actions, (GrammarAST)input.LT(1));}
ruleBlock exceptionGroup
{finishRule((RuleAST)$RULE, $RULE_REF, $ruleBlock.start); currentRuleName=null; currentRuleAST=null;}
)
;

exceptionGroup
@init {
    enterExceptionGroup($start);
}
@after {
    exitExceptionGroup($start);
}
: exceptionHandler* finallyClause?
;

exceptionHandler
@init {
    enterExceptionHandler($start);
}
@after {
    exitExceptionHandler($start);
}
: ^(CATCH ARG_ACTION ACTION) {ruleCatch($ARG_ACTION, (ActionAST)$ACTION);}
;

finallyClause
@init {
    enterFinallyClause($start);
}
@after {
    exitFinallyClause($start);
}
: ^(FINALLY ACTION) {finallyAction((ActionAST)$ACTION);}
;

locals
@init {
    enterLocals($start);
}
@after {
    exitLocals($start);
}
: ^(LOCALS ARG_ACTION)
;

```

```

ruleReturns
@init {
    enterRuleReturns($start);
}
@after {
    exitRuleReturns($start);
}
: ^(RETURNS ARG_ACTION)
;

```

```

throwsSpec
@init {
    enterThrowsSpec($start);
}
@after {
    exitThrowsSpec($start);
}
: ^(THROWS ID+)
;

```

```

ruleAction
@init {
    enterRuleAction($start);
}
@after {
    exitRuleAction($start);
}
: ^(AT ID ACTION)
;

```

```

ruleModifier
@init {
    enterRuleModifier($start);
}
@after {
    exitRuleModifier($start);
}
: PUBLIC
| PRIVATE
| PROTECTED
| FRAGMENT
;

```

```

lexerRuleBlock
@init {
    enterLexerRuleBlock($start);
}

```

```

@after {
  exitLexerRuleBlock($start);
}
: ^( BLOCK
  ( {
    currentOuterAltRoot = (GrammarAST)input.LT(1);
    currentOuterAltNumber++;
  }
  lexerOuterAlternative
  )+
  )
;

```

```

ruleBlock
@init {
  enterRuleBlock($start);
}
@after {
  exitRuleBlock($start);
}
: ^( BLOCK
  ( {
    currentOuterAltRoot = (GrammarAST)input.LT(1);
    currentOuterAltNumber++;
  }
  outerAlternative
  )+
  )
;

```

```

lexerOuterAlternative
@init {
  enterLexerOuterAlternative((AltAST)$start);
  discoverOuterAlt((AltAST)$start);
}
@after {
  finishOuterAlt((AltAST)$start);
  exitLexerOuterAlternative((AltAST)$start);
}
: lexerAlternative
;

```

```

outerAlternative
@init {
  enterOuterAlternative((AltAST)$start);
  discoverOuterAlt((AltAST)$start);
}

```

```

@after {
  finishOuterAlt((AltAST)$start);
  exitOuterAlternative((AltAST)$start);
}
: alternative
;

```

lexerAlternative

```

@init {
  enterLexerAlternative($start);
}
@after {
  exitLexerAlternative($start);
}
: ^(LEXER_ALT_ACTION lexerElements lexerCommand+)
  | lexerElements
;

```

lexerElements

```

@init {
  enterLexerElements($start);
}
@after {
  exitLexerElements($start);
}
: ^(ALT lexerElement+)
;

```

lexerElement

```

@init {
  enterLexerElement($start);
}
@after {
  exitLexerElement($start);
}
: labeledLexerElement
  | lexerAtom
  | lexerSubrule
  | ACTION {actionInAlt((ActionAST)$ACTION);}
  | SEMPRED {sempredInAlt((PredAST)$SEMPRED);}
  | ^(ACTION elementOptions) {actionInAlt((ActionAST)$ACTION);}
  | ^(SEMPRED elementOptions) {sempredInAlt((PredAST)$SEMPRED);}
  | EPSILON
;

```

labeledLexerElement

```

@init {
  enterLabeledLexerElement($start);
}

```

```

}
@after {
  exitLabeledLexerElement($start);
}
: ^((ASSIGN|PLUS_ASSIGN) ID (lexerAtom|block))
;

```

```

lexerBlock
@init {
  enterLexerBlock($start);
}
@after {
  exitLexerBlock($start);
}
: ^(BLOCK optionsSpec? lexerAlternative+)
;

```

```

lexerAtom
@init {
  enterLexerAtom($start);
}
@after {
  exitLexerAtom($start);
}
: terminal
| ^(NOT blockSet)
| blockSet
| ^(WILDCARD elementOptions)
| WILDCARD
| LEXER_CHAR_SET
| range
| ruleref
;

```

```

actionElement
@init {
  enterActionElement($start);
}
@after {
  exitActionElement($start);
}
: ACTION
| ^(ACTION elementOptions)
| SEMPRED
| ^(SEMPRED elementOptions)
;

```

```

alternative

```

```

@init {
  enterAlternative((AltAST)$start);
  discoverAlt((AltAST)$start);
}
@after {
  finishAlt((AltAST)$start);
  exitAlternative((AltAST)$start);
}
: ^(ALT elementOptions? element+)
| ^(ALT elementOptions? EPSILON)
;

lexerCommand
@init {
  enterLexerCommand($start);
}
@after {
  exitLexerCommand($start);
}
: ^(LEXER_ACTION_CALL ID lexerCommandExpr)
  {lexerCallCommand(currentOuterAltNumber, $ID, $lexerCommandExpr.start);}
| ID
  {lexerCommand(currentOuterAltNumber, $ID);}
;

lexerCommandExpr
@init {
  enterLexerCommandExpr($start);
}
@after {
  exitLexerCommandExpr($start);
}
: ID
| INT
;

element
@init {
  enterElement($start);
}
@after {
  exitElement($start);
}
: labeledElement
| atom
| subrule
| ACTION    {actionInAlt((ActionAST)$ACTION);}
| SEMPRED   {sempredInAlt((PredAST)$SEMPRED);}

```

```

| ^(ACTION elementOptions) {actionInAlt((ActionAST)$ACTION);}
| ^(SEMPRED elementOptions) {sempredInAlt((PredAST)$SEMPRED);}
| range
| ^(NOT blockSet)
| ^(NOT block)
;

astOperand
@init {
  enterAstOperand($start);
}
@after {
  exitAstOperand($start);
}
: atom
| ^(NOT blockSet)
| ^(NOT block)
;

labeledElement
@init {
  enterLabeledElement($start);
}
@after {
  exitLabeledElement($start);
}
: ^((ASSIGN|PLUS_ASSIGN) ID element) {label($start, $ID, $element.start);}
;

subrule
@init {
  enterSubrule($start);
}
@after {
  exitSubrule($start);
}
: ^(blockSuffix block)
| block
;

lexerSubrule
@init {
  enterLexerSubrule($start);
}
@after {
  exitLexerSubrule($start);
}
: ^(blockSuffix lexerBlock)

```

```

| lexerBlock
;

blockSuffix
@init {
  enterBlockSuffix($start);
}
@after {
  exitBlockSuffix($start);
}
: ebnfSuffix
;

ebnfSuffix
@init {
  enterEbnfSuffix($start);
}
@after {
  exitEbnfSuffix($start);
}
: OPTIONAL
| CLOSURE
| POSITIVE_CLOSURE
;

atom
@init {
  enterAtom($start);
}
@after {
  exitAtom($start);
}
: ^(DOT ID terminal)
| ^(DOT ID ruleref)
| ^(WILDCARD elementOptions) { wildcardRef($WILDCARD);}
| WILDCARD { wildcardRef($WILDCARD);}
| terminal
| blockSet
| ruleref
;

blockSet
@init {
  enterBlockSet($start);
}
@after {
  exitBlockSet($start);
}

```

```

: ^(SET setElement+)
;

setElement
@init {
  enterSetElement($start);
}
@after {
  exitSetElement($start);
}
: ^(STRING_LITERAL elementOptions) {stringRef((TerminalAST)$STRING_LITERAL);}
| ^(TOKEN_REF elementOptions) {tokenRef((TerminalAST)$TOKEN_REF);}
| STRING_LITERAL {stringRef((TerminalAST)$STRING_LITERAL);}
| TOKEN_REF {tokenRef((TerminalAST)$TOKEN_REF);}
| ^(RANGE a=STRING_LITERAL b=STRING_LITERAL)
{
  stringRef((TerminalAST)$a);
  stringRef((TerminalAST)$b);
}
| LEXER_CHAR_SET
;

```

```

block
@init {
  enterBlock($start);
}
@after {
  exitBlock($start);
}
: ^(BLOCK optionsSpec? ruleAction* ACTION? alternative+)
;

```

```

ruleref
@init {
  enterRuleref($start);
}
@after {
  exitRuleref($start);
}
: ^(RULE_REF arg=ARG_ACTION? elementOptions?)
{
  ruleRef($RULE_REF, (ActionAST)$ARG_ACTION);
  if ( $arg!=null ) actionInAlt((ActionAST)$arg);
}
;

```

```

range
@init {

```

```

enterRange($start);
}
@after {
exitRange($start);
}
: ^(RANGE STRING_LITERAL STRING_LITERAL)
;

terminal
@init {
enterTerminal($start);
}
@after {
exitTerminal($start);
}
: ^(STRING_LITERAL elementOptions)
    {stringRef((TerminalAST)$STRING_LITERAL);}
| STRING_LITERAL {stringRef((TerminalAST)$STRING_LITERAL);}
| ^(TOKEN_REF elementOptions) {tokenRef((TerminalAST)$TOKEN_REF);}
| TOKEN_REF {tokenRef((TerminalAST)$TOKEN_REF);}
;

elementOptions
@init {
enterElementOptions($start);
}
@after {
exitElementOptions($start);
}
: ^(ELEMENT_OPTIONS elementOption[(GrammarASTWithOptions)$start.getParent()]*)
;

elementOption[GrammarASTWithOptions t]
@init {
enterElementOption($start);
}
@after {
exitElementOption($start);
}
: ID {elementOption(t, $ID, null);}
| ^(ASSIGN id=ID v=ID) {elementOption(t, $id, $v);}
| ^(ASSIGN ID v=STRING_LITERAL) {elementOption(t, $ID, $v);}
| ^(ASSIGN ID v=ACTION) {elementOption(t, $ID, $v);}
| ^(ASSIGN ID v=INT) {elementOption(t, $ID, $v);}
;

```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-

jar/org/antlr/v4/parse/GrammarTreeVisitor.g

No license file was found, but licenses were detected in source scan.

```
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 */
```

```
/** ANTLR tool checks output templates are compatible with tool code generation.
```

```
 * For now, a simple string match used on x.y of x.y.z scheme.
```

```
 * Must match Tool.VERSION during load to templates.
```

```
 *
```

```
 * REQUIRED.
```

```
 */
```

```
pythonTypeInitMap ::= [
```

```
  "bool": "False",
```

```
  "int": "0",
```

```
  "float": "0.0",
```

```
  "str": "",
```

```
  default: "None" // anything other than a primitive type is an object
```

```
]
```

```

// args must be <object-model-object>, <fields-resulting-in-STs>

ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
# encoding: utf-8
from antlr4 import *
from io import StringIO
import sys
if sys.version_info[1] > 5:
    from typing import TextIO
else:
    from typing.io import TextIO

<namedActions.header>
<parser>

>>

ListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
from antlr4 import *
if __name__ is not None and "." in __name__:
    from <file.parserName> import <file.parserName>
else:
    from <file.parserName> import <file.parserName>
<header>

# This class defines a complete listener for a parse tree produced by <file.parserName>.
class <file.grammarName>Listener(ParseTreeListener):

    <file.listenerNames>:{lname |
# Enter a parse tree produced by <file.parserName>#<lname>.
def enter<lname; format="cap">(self, ctx:<file.parserName>.<lname; format="cap">Context):
    pass

# Exit a parse tree produced by <file.parserName>#<lname>.
def exit<lname; format="cap">(self, ctx:<file.parserName>.<lname; format="cap">Context):
    pass

}; separator="\n">

del <file.parserName>

>>

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>

```

```

from antlr4 import *
if __name__ is not None and "." in __name__:
    from <file.parserName> import <file.parserName>
else:
    from <file.parserName> import <file.parserName>
<header>

# This class defines a complete generic visitor for a parse tree produced by <file.parserName>.

class <file.grammarName>Visitor(ParseTreeVisitor):

    <file.visitorNames>: { lname |
# Visit a parse tree produced by <file.parserName>#<lname>.
def visit<lname; format="cap">(self, ctx:<file.parserName>.<lname; format="cap">Context):
    return self.visitChildren(ctx)

}; separator="\n">

del <file.parserName>
>>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
# Generated from <grammarFileName> by ANTLR <ANTLRVersion>
>>

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
<if(superClass)>
if __name__ is not None and "." in __name__:
    from <superClass> import <superClass>
else:
    from <superClass> import <superClass>

<endif>
<atn>

class <parser.name> ( <if(superClass)><superClass><else>Parser<endif> ):

    grammarFileName = "<parser.grammarFileName>"

    atn = ATNDeserializer().deserialize(serializedATN())

    decisionsToDFA = [ DFA(ds, i) for i, ds in enumerate(atn.decisionToState) ]

```

```

sharedContextCache = PredictionContextCache()

literalNames = [ <parser.literalNames:{t | <t>}; null="\\"<INVALID>\"", separator=", ", wrap, anchor> ]

symbolicNames = [ <parser.symbolicNames:{t | <t>}; null="\\"<INVALID>\"", separator=", ", wrap, anchor> ]

<if(parser.rules)>
<parser.rules:{r | RULE_<r.name> = <r.index>}; separator="\n", wrap, anchor>
<endif>

ruleNames = [ <parser.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor> ]

EOF = <TokenLabelType().EOF

<if(parser.tokens)>
<parser.tokens:{k | <k>=<parser.tokens.(k)>}; separator="\n", wrap, anchor>
<endif>

<parser:(ctor())>

<namedActions.members>

<funcs; separator="\n">

<if( sempredFuncs)>
def sempred(self, localctx:RuleContext, ruleIndex:int, predIndex:int):
    if self._predicates == None:
        self._predicates = dict()
<parser.sempredFuncs.values:{ f |
    self._predicates[<f.ruleIndex>] = self.<f.name>_sempred}; separator="\n    ">
    pred = self._predicates.get(ruleIndex, None)
    if pred is None:
        raise Exception("No predicate with index:" + str(ruleIndex))
    else:
        return pred(localctx, predIndex)

<sempredFuncs.values; separator="\n">
<endif>

>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
def action(self, localctx:RuleContext, ruleIndex:int, actionIndex:int):
    if self._actions is None:
        actions = dict()

```

```

<recog.actionFuncs.values:{f|
    actions[<f.ruleIndex>] = self.<f.name>_action }; separator="\n">
    self._actions = actions
    action = self._actions.get(ruleIndex, None)
    if action is not None:
        action(localctx, actionIndex)
    else:
        raise Exception("No registered action for:" + str(ruleIndex))

<actionFuncs.values; separator="\n">

<endif>
<if(sempredFuncs)>
def sempred(self, localctx:RuleContext, ruleIndex:int, predIndex:int):
    if self._predicates is None:
        preds = dict()
<recog.sempredFuncs.values:{f|
    preds[<f.ruleIndex>] = self.<f.name>_sempred}; separator="\n">
    self._predicates = preds
    pred = self._predicates.get(ruleIndex, None)
    if pred is not None:
        return pred(localctx, predIndex)
    else:
        raise Exception("No registered predicate for:" + str(ruleIndex))

<sempredFuncs.values; separator="\n">
<endif>
>>

parser_ctor(p) ::= <<
def __init__(self, input:TokenStream, output:TextIO = sys.stdout):
    super().__init__(input, output)
    self.checkVersion("<file.ANTLRVersion>")
    self._interp = ParserATNSimulator(self, self.atn, self.decisionsToDFA, self.sharedContextCache)
    self._predicates = None

>>

/* This generates a private method since the actionIndex is generated, making an
* overriding implementation impossible to maintain.
*/
RuleActionFunction(r, actions) ::= <<

def <r.name>_action(self, localctx:<r.ctxType> , actionIndex:int):
<actions:{index|
<if(first(actions))>
    if actionIndex == <index>:
        <actions.(index)>

```

```

<elseif(rest(actions))>
  elif actionIndex == <index>:
    <actions.(index)>
<endif> }; separator="\n">
>>

/* This generates a private method since the predIndex is generated, making an
* overriding implementation impossible to maintain.
*/
RuleSempredFunction(r, actions) ::= <<
def <r.name>_sempred(self, localctx:<r.ctxType>, predIndex:int):
  <actions:{index|
<if(first(actions))>
  if predIndex == <index>:
    return <actions.(index)>
<elseif(rest(actions))>
  elif predIndex == <index>:
    return <actions.(index)>
<endif> }; separator="\n">

>>

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<

<ruleCtx>

<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">

def <currentRule.name>(self<currentRule.args:{a | , <a.name><if(a.type)>:<a.type><endif> }>):

  localctx = <parser.name>.<currentRule.ctxType>(self, self._ctx, self.state<currentRule.args:{a | , <a.name>}>))
  self.enterRule(localctx, <currentRule.startState>, self.RULE_<currentRule.name>)
  <namedActions.init>
  <locals; separator="\n">
  try:
    <code>
    <postamble; separator="\n">
    <namedActions.after>
  <if(exceptions)>
  <exceptions; separator="\n">
  <else>
  except RecognitionException as re:
    localctx.exception = re
    self._errHandler.reportError(self, re)
    self._errHandler.recover(self, re)
  <endif>
  finally:

```

```

    <finallyAction>
    self.exitRule()
    return localctx

>>

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,
    namedActions,finallyAction,postamble) ::=

<<

<ruleCtx>
<altLabelCtxs:{l | <altLabelCtxs.(l)>} ; separator="\n">

def <currentRule.name>(self, _p:int=0<if(currentRule.args)>, <args:{ a | , <a>}><endif>):
    _parentctx = self._ctx
    _parentState = self.state
    localctx = <parser.name>.<currentRule.ctxType>(self, self._ctx, _parentState<args:{ a | , <a.name>}>)
    _prevctx = localctx
    _startState = <currentRule.startState>
    self.enterRecursionRule(localctx, <currentRule.startState>, self.RULE_<currentRule.name>, _p)
    <namedActions.init>
    <locals; separator="\n">
    try:
        <code>
        <postamble; separator="\n">
        <namedActions.after>
    except RecognitionException as re:
        localctx.exception = re
        self._errHandler.reportError(self, re)
        self._errHandler.recover(self, re)
    finally:
        <finallyAction>
        self.unrollRecursionContexts(_parentctx)
    return localctx

>>

CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>localctx = <parser.name>.<currentOuterMostAltCodeBlock.altLabel>;
format="cap">Context(self, localctx)<endif>
self.enterOuterAlt(localctx, <currentOuterMostAltCodeBlock.alt.altNum>)
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">

```

>>

```
LL1AltBlock(choice, preamble, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = _input.LT(1)<endif>
<preamble; separator="\n">
token = self._input.LA(1)
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  pass }; separator="\nel">
else:
  <error>
```

>>

```
LL1OptionalBlock(choice, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
token = self._input.LA(1)
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  pass }; separator="\nel">
else:
  pass
```

>>

```
LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<preamble; separator="\n">
if <expr>:
  <alts; separator="\n">
```

```
<!else if ( !(<followExpr> ) ) <error>!>
```

>>

```
LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<preamble; separator="\n">
while <loopExpr>:
  <alts; separator="\n">
  self.state = <choice.loopBackStateNumber>
  self._errHandler.sync(self)
  <iteration>
```

>>

```
LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
self.state = <choice.blockStartStateNumber> <! alt block decision !>
self._errHandler.sync(self)
<preamble; separator="\n">
while True:
    <alts; separator="\n">
    self.state = <choice.stateNumber> <! loopback/exit decision !>
    self._errHandler.sync(self)
    <iteration>
    if not (<loopExpr>):
        break
```

>>

```
// LL(*) stuff
```

```
AltBlock(choice, preamble, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = _input.LT(1)<endif>
<preamble; separator="\n">
la_ = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
<alts:{ alt |
if la_ == <i>:
    <alt>
    pass
}; separator="\nel">
```

>>

```
OptionalBlock(choice, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
la_ = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
<alts:{ alt |
if la_ == <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
}; separator="\nel">
```

>>

```
StarBlock(choice, alts, sync, iteration) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
_alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
while _alt!=<choice.exitAlt> and _alt!=ATN.INVALID_ALT_NUMBER:
```

```

if _alt==1<if(!choice.ast.greedy)>+1<endif>:
  <iteration>
  <alts> <! should only be one !>
  self.state = <choice.loopBackStateNumber>
  self._errHandler.sync(self)
  _alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)

>>

```

```

PlusBlock(choice, alts, error) ::= <<
self.state = <choice.blockStartStateNumber> <! alt block decision !>
self._errHandler.sync(self)
_alt = 1<if(!choice.ast.greedy)>+1<endif>
while _alt!=<choice.exitAlt> and _alt!=ATN.INVALID_ALT_NUMBER:
  <alts:{alt|
if _alt == <i><if(!choice.ast.greedy)>+1<endif>:
  <alt>
}; separator="\nel">
  else:
    <error>
  self.state = <choice.loopBackStateNumber> <! loopback/exit decision !>
  self._errHandler.sync(self)
  _alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)

>>

```

```

Sync(s) ::= "sync(<s.expecting.name>)"

```

```

ThrowNoViableAlt(t) ::= "raise NoViableAltException(self)"

```

```

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" or ">
>>

```

```

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>

```

```

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange(<{<offsetShiftVar(s.varName, bits.shift)>}&>) and ((1 \<< <offsetShiftVar(s.varName,
bits.shift)>) & (<bits.ttypes:{ttype | (1 \<< <offsetShiftType(ttype, bits.shift)>)); separator=" | ">)) != 0)
%>

```

```

isZero ::= [
"0":true,

```

```

default:false
]

offsetShiftVar(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

offsetShiftType(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><parser.name>.<shiftAmount> - <offset><else><parser.name>.<shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ ttype | <s.varName>==<parser.name>.<ttype> }; separator=" or ">
%>

cases(ttypes) ::= <<
if token in [<ttypes:{ t | <parser.name>.<t> }; separator=", ">]:
>>

InvokeRule(r, argExprsChunks) ::= <<
self.state = <r.stateNumber>
<if(r.labels)><r.labels:{1 | <labelref(l)> =
}><endif>self.<r.name><(if(r.ast.options.p)><r.ast.options.p><(if(argExprsChunks)><endif><endif><argExprsChu
nks)>
>>

MatchToken(m) ::= <<
self.state = <m.stateNumber>
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>self.match(<parser.name>.<m.name>)
>>

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

CommonSetStuff(m, expr, capture, invert) ::= <<
self.state = <m.stateNumber>
<if(m.labels)><m.labels:{1 | <labelref(l)> = }>self._input.LT(1)<endif>
<capture>
<if(invert)>if <m.varName> \<= 0 or <expr><else>if not(<expr><endif>:
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><else> <endif>self._errHandler.recoverInline(self)
else:
  self._errHandler.reportMatch(self)
  self.consume()
>>

Wildcard(w) ::= <<

```

```

self.state = <w.stateNumber>
<if(w.labels)><w.labels:{1 | <labelref(1)> = }><endif>self.matchWildcard()
>>

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
self.state = <p.stateNumber>
if not <chunks>:
    from antlr4.error.Errors import FailedPredicateException
    raise FailedPredicateException(self, <p.predicate><if(failChunks)>, <failChunks><elseif(p.msg)>,
<p.msg><endif>)
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
except <catchArg>:
    <catchAction>
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "skip()"
LexerMoreCommand() ::= "more()"
LexerPopModeCommand() ::= "popMode()"

LexerTypeCommand(arg, grammar)    ::= "_type = <arg>"
LexerChannelCommand(arg, grammar) ::= "_channel = <arg>"
LexerModeCommand(arg, grammar)    ::= "_mode = <arg>"
LexerPushModeCommand(arg, grammar) ::= "pushMode(<arg>)"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "localctx.<a.name>"
LocalRef(a) ::= "localctx.<a.name>"
RetValRef(a) ::= "localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>"

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

```

```

TokenPropertyRef_text(t) ::= "(None if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.text)"
TokenPropertyRef_type(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.type)"
TokenPropertyRef_line(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.line)"
TokenPropertyRef_pos(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.column)"
TokenPropertyRef_channel(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.channel)"
TokenPropertyRef_index(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.tokenIndex)"
TokenPropertyRef_int(t) ::= "(0 if <ctx(t)>.<t.label> is None else int(<ctx(t)>.<t.label>.text))"

RulePropertyRef_start(r) ::= "(None if <ctx(r)>.<r.label> is None else <ctx(r)>.<r.label>.start)"
RulePropertyRef_stop(r) ::= "(None if <ctx(r)>.<r.label> is None else <ctx(r)>.<r.label>.stop)"
RulePropertyRef_text(r) ::= "(None if <ctx(r)>.<r.label> is None else
self._input.getText(<ctx(r)>.<r.label>.start,<ctx(r)>.<r.label>.stop))"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "self"

ThisRulePropertyRef_start(r) ::= "localctx.start"
ThisRulePropertyRef_stop(r) ::= "localctx.stop"
ThisRulePropertyRef_text(r) ::= "self._input.getText(localctx.start, self._input.LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "localctx"
ThisRulePropertyRef_parser(r) ::= "self"

NonLocalAttrRef(s) ::= "self.getInvokingContext(<s.ruleIndex>).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::= "self.getInvokingContext(<s.ruleIndex>).<s.name> = <rhsChunks>"

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.append(<labelref(a.label)>)"

TokenDecl(t) ::= "self.<t.name> = None # <TokenLabelType()>"
TokenTypeDecl(t) ::= "self.<t.name> = 0 # <TokenLabelType()> type"
TokenListDecl(t) ::= "self.<t.name> = list() # of <TokenLabelType()>s"
RuleContextDecl(r) ::= "self.<r.name> = None # <r.ctxName>"
RuleContextListDecl(rdecl) ::= "self.<rdecl.name> = list() # of <rdecl.ctxName>s"

ContextTokenGetterDecl(t) ::= <<
def <t.name>(self):
    return self.getToken(<parser.name>.<t.name>, 0)
>>

// should never be called
ContextTokenListGetterDecl(t) ::= <<
def <t.name>_list(self):
    return self.getTokens(<parser.name>.<t.name>)
>>

ContextTokenListIndexedGetterDecl(t) ::= <<
def <t.name>(self, i:int=None):
    if i is None:
        return self.getTokens(<parser.name>.<t.name>)

```

```

else:
    return self.getToken(<parser.name>.<t.name>, i)
>>

ContextRuleGetterDecl(r) ::= <<
def <r.name>(self):
    return self.getTypedRuleContext(<parser.name>.<r.ctxName>,0)

>>

// should never be called
ContextRuleListGetterDecl(r) ::= <<
def <r.name>_list(self):
    return self.getTypedRuleContexts(<parser.name>.<r.ctxName>)

>>

ContextRuleListIndexedGetterDecl(r) ::= <<
def <r.name>(self, i:int=None):
    if i is None:
        return self.getTypedRuleContexts(<parser.name>.<r.ctxName>)
    else:
        return self.getTypedRuleContext(<parser.name>.<r.ctxName>,i)

>>

LexerRuleContext() ::= "RuleContext"

/** The rule context name is the rule followed by a suffix; e.g.,
 * r becomes rContext.
 */
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenName>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "<d.varName> = self._input.LT(1)"
CaptureNextTokenType(d) ::= "<d.varName> = self._input.LA(1)"

StructDecl(struct,ctorAttrs,attrs, getters,dispatchMethods,interfaces,extensionMembers) ::= <<
class <struct.name>(<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif>):
    __slots__ = 'parser'

    def __init__(self, parser, parent:ParserRuleContext=None, invokingState:int=-1<struct.ctorAttrs:{ a | ,
<a.name><if(a.type)>:<a.type><endif>=None }):
        super().__init__(parent, invokingState)

```

```

    self.parser = parser
    <attrs:{ a | <a>}; separator="\n">
    <struct.ctorAttrs:{ a | self.<a.name> = <a.name>}; separator="\n">

<getters:{ g | <g>}; separator="\n\n">

def getRuleIndex(self):
    return <parser.name>.RULE_<struct.derivedFromName>

<if(struct.provideCopyFrom)> <! don't need copy unless we have subclasses !>
def copyFrom(self, ctx:ParserRuleContext):
    super().copyFrom(ctx)
    <struct.attrs:{ a | self.<a.name> = ctx.<a.name>}; separator="\n">

<endif>
    <dispatchMethods; separator="\n">
    <extensionMembers; separator="\n">

>>

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
class <struct.name>(<currentRule.name; format="cap">Context):

    def __init__(self, parser, ctx:ParserRuleContext): # actually a <parser.name>.<currentRule.name;
format="cap">Context
        super().__init__(parser)
        <attrs:{ a | <a>}; separator="\n">
        self.copyFrom(ctx)

    <getters:{ g | <g>}; separator="\n">

    <dispatchMethods; separator="\n">

>>

ListenerDispatchMethod(method) ::= <<
def <if(method.isEnter)>enter<else>exit<endif>Rule(self, listener:ParseTreeListener):
    if hasattr( listener, "<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">" ):
        listener.<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">(self)

>>

VisitorDispatchMethod(method) ::= <<
def accept(self, visitor:ParseTreeVisitor):
    if hasattr( visitor, "visit<struct.derivedFromName; format="cap">" ):
        return visitor.visit<struct.derivedFromName; format="cap">(self)
    else:
        return visitor.visitChildren(self)

```

```

>>

AttributeDecl(d) ::= "self.<d.name> = <if(d.initValue)><d.initValue><else>None<endif>"

/** If we don't know location of label def x, use this template */
labelref(x) ::= "<if(!x.isLocal)>localctx.<endif><x.name>"

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "localctx"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "self.precpred(self._ctx, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name>=<src>.<name>"
recRuleSetStopToken() ::= "self._ctx.stop = self._input.LT(-1)"

recRuleAltStartAction(ruleName, ctxName, label) ::= <<
localctx = <parser.name>.<ctxName>Context(self, _parentctx, _parentState)
<if(label)>localctx.<label> = _prevctx<endif>
self.pushNewRecursionContext(localctx, _startState, self.RULE_<ruleName>)
>>

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
localctx = <parser.name>.<currentAltLabel; format="cap">Context(self, <parser.name>.<ruleName>;
format="cap">Context(self, _parentctx, _parentState))
<if(label)>
<if(isListLabel)>
localctx.<label>.append(_prevctx)
<else>
localctx.<label> = _prevctx
<endif>
<endif>
self.pushNewRecursionContext(localctx, _startState, self.RULE_<ruleName>)
>>

recRuleReplaceContext(ctxName) ::= <<
localctx = <parser.name>.<ctxName>Context(self, localctx)
self._ctx = localctx
_prevctx = localctx
>>

recRuleSetPrevCtx() ::= <<
if self._parseListeners is not None:
    self.triggerExitRuleEvent()
_prevctx = localctx
>>

```

```

LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
from antlr4 import *
from io import StringIO
import sys
if sys.version_info[1] > 5:
    from typing import TextIO
else:
    from typing.io import TextIO

<namedActions.header>

<lexer>
>>

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
<if(superClass)>
if __name__ is not None and "." in __name__:
    from <superClass> import <superClass>
else:
    from <superClass> import <superClass>

<endif>
<atn>

class <lexer.name><(if(superClass))<superClass><else>Lexer<endif>:

    atn = ATNDeserializer().deserialize(serializedATN())

    decisionsToDFA = [ DFA(ds, i) for i, ds in enumerate(atn.decisionToState) ]

    <if(lexer.channels)>
    <lexer.channels:{c| <c> = <lexer.channels.(c)>}; separator="\n">

    <endif>
    <if(rest(lexer.modes))>
    <rest(lexer.modes):{m| <m> = <i>}; separator="\n">

    <endif>
    <if(lexer.tokens)>
    <lexer.tokens:{k| <k> = <lexer.tokens.(k)>}; separator="\n", wrap, anchor>
    <endif>

    channelNames = [ u"DEFAULT_TOKEN_CHANNEL", u"HIDDEN"<if (lexer.channels)>, <lexer.channels:{c|
u"<c>">}; separator=", ", wrap, anchor><endif> ]

    modeNames = [ <lexer.modes:{m| "<m>"}; separator=", ", wrap, anchor> ]

```

```

literalNames = [ "\<INVALID>",
                 <lexer.literalNames:{t | <t>}; separator=", ", wrap, anchor> ]

symbolicNames = [ "\<INVALID>",
                  <lexer.symbolicNames:{t | <t>}; separator=", ", wrap, anchor> ]

ruleNames = [ <lexer.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor> ]

grammarFileName = "<lexer.grammarFileName>"

def __init__(self, input=None, output:TextIO = sys.stdout):
    super().__init__(input, output)
    self.checkVersion("<lexerFile.ANTLRVersion>")
    self._interp = LexerATNSimulator(self, self.atn, self.decisionsToDFA, PredictionContextCache())
    self._actions = None
    self._predicates = None

<namedActions.members>

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>

>>

SerializedATN(model) ::= <<
<! only one segment, can be inlined !>

def serializedATN():
    with StringIO() as buf:
        buf.write("<model.serialized; wrap={ }<n>    buf.write({ }>")
        return buf.getvalue()

>>

/** Using a type to init value map, try to init a type; if not in table
 * must be an object, default value is "null".
 */
initValue(typeName) ::= <<
<pythonTypeInitMap.(typeName)>
>>

codeFileExtension() ::= ".py"

Found in path(s):
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/Python3/Python3.stg
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/*

```

```

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*/

```

```

/** Find left-recursive rules */

```

```

tree grammar LeftRecursiveRuleWalker;

```

```

options {
    tokenVocab=ANTLRParser;
    ASTLabelType=GrammarAST;
}

```

```

@header {
package org.antlr.v4.parse;

```

```

import org.antlr.v4.misc.*;
import org.antlr.v4.tool.*;
import org.antlr.v4.tool.ast.*;
}

```

```

@members {
private String ruleName;
private int currentOuterAltNumber; // which outer alt of rule?

```

```

public int numAlts; // how many alts for this rule total?

public void setAltAssoc(AltAST altTree, int alt) {}
public void binaryAlt(AltAST altTree, int alt) {}
public void prefixAlt(AltAST altTree, int alt) {}
public void suffixAlt(AltAST altTree, int alt) {}
public void otherAlt(AltAST altTree, int alt) {}
public void setReturnValues(GrammarAST t) {}
}

@rulecatch { }

// TODO: can get parser errors for not matching pattern; make them go away
public
rec_rule returns [boolean isLeftRec]
@init
{
    currentOuterAltNumber = 1;
}
: ^( r=RULE id=RULE_REF {ruleName=$id.getText();}
    ruleModifier?
// (ARG_ACTION)? shouldn't allow args, right?
    ^(RETURNS a=ARG_ACTION {setReturnValues($a);})?
// ( ^ (THROWS .+) )? don't allow
    ( ^(LOCALS ARG_ACTION) )? // TODO: copy these to gen'd code
    ( ^(OPTIONS .*)
    | ^(AT ID ACTION) // TODO: copy
    )*
    ruleBlock { $isLeftRec = $ruleBlock.isLeftRec; }
    exceptionGroup
)
;

exceptionGroup
: exceptionHandler* finallyClause?
;

exceptionHandler
: ^(CATCH ARG_ACTION ACTION)
;

finallyClause
: ^(FINALLY ACTION)
;

ruleModifier
: PUBLIC
| PRIVATE

```

```

| PROTECTED
;

ruleBlock returns [boolean isLeftRec]
@init{boolean lr=false; this.numAlts = $start.getChildCount();}
: ^( BLOCK
(
o=outerAlternative
{if ($o.isLeftRec) $isLeftRec = true;}
{currentOuterAltNumber++;}
)+
)
;

/** An alt is either prefix, suffix, binary, or ternary operation or "other" */
outerAlternative returns [boolean isLeftRec]
: (binary)=>    binary
                {binaryAlt((AltAST)$start, currentOuterAltNumber); $isLeftRec=true;}
| (prefix)=>    prefix
                {prefixAlt((AltAST)$start, currentOuterAltNumber);}
| (suffix)=>    suffix
                {suffixAlt((AltAST)$start, currentOuterAltNumber); $isLeftRec=true;}
| nonLeftRecur {otherAlt((AltAST)$start, currentOuterAltNumber);}
;

binary
: ^( ALT elementOptions? recurse element* recurse epsilonElement* )
  {setAltAssoc((AltAST)$ALT,currentOuterAltNumber);}
;

prefix
: ^( ALT elementOptions?
element+
recurse epsilonElement*
)
  {setAltAssoc((AltAST)$ALT,currentOuterAltNumber);}
;

suffix
: ^( ALT elementOptions? recurse element+ )
  {setAltAssoc((AltAST)$ALT,currentOuterAltNumber);}
;

nonLeftRecur
: ^(ALT elementOptions? element+)
;

recurse

```

```
: ^(ASSIGN ID recurseNoLabel)
| ^(PLUS_ASSIGN ID recurseNoLabel)
| recurseNoLabel
;
```

```
recurseNoLabel : {((CommonTree)input.LT(1)).getText().equals(ruleName)}? RULE_REF;
```

```
token returns [GrammarAST t=null]
: ^(ASSIGN ID s=token {$t = $s.t;})
| ^(PLUS_ASSIGN ID s=token {$t = $s.t;})
| b=STRING_LITERAL    {$t = $b;}
| ^(b=STRING_LITERAL elementOptions) {$t = $b;}
| ^(c=TOKEN_REF elementOptions) {$t = $c;}
| c=TOKEN_REF        {$t = $c;}
;
```

```
elementOptions
: ^(ELEMENT_OPTIONS elementOption*)
;
```

```
elementOption
: ID
| ^(ASSIGN ID ID)
| ^(ASSIGN ID STRING_LITERAL)
| ^(ASSIGN ID ACTION)
| ^(ASSIGN ID INT)
;
```

```
element
: atom
| ^(NOT element)
| ^(RANGE atom atom)
| ^(ASSIGN ID element)
| ^(PLUS_ASSIGN ID element)
| ^(SET setElement+)
| RULE_REF
| ebnf
| epsilonElement
;
```

```
epsilonElement
: ACTION
| SEMPRED
| EPSILON
| ^(ACTION elementOptions)
| ^(SEMPRED elementOptions)
;
```

```
setElement
: ^(STRING_LITERAL elementOptions)
| ^(TOKEN_REF elementOptions)
| STRING_LITERAL
| TOKEN_REF
;
```

```
ebnf: block
| ^( OPTIONAL block )
| ^( CLOSURE block )
| ^( POSITIVE_CLOSURE block )
;
```

```
block
: ^(BLOCK ACTION? alternative+)
;
```

```
alternative
: ^(ALT elementOptions? element+)
;
```

```
atom
: ^(RULE_REF ARG_ACTION? elementOptions?)
| ^(STRING_LITERAL elementOptions)
| STRING_LITERAL
| ^(TOKEN_REF elementOptions)
| TOKEN_REF
| ^(WILDCARD elementOptions)
| WILDCARD
| ^(DOT ID element)
;
```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/LeftRecursiveRuleWalker.g

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\*/

```
dartTypeInitMap ::= [  
  "int": "0",  
  "double": "0.0",  
  "bool": "false",  
  default: "null" // anything other than a primitive type is an object  
]
```

```
// args must be <object-model-object>, <fields-resulting-in-STs>
```

```
ParserFile(file, parser, namedActions, contextSuperClass) ::= <<  
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
```

```
<if(file.genPackage)>
```

```
library <file.genPackage>;
```

```
import 'package:antlr4/antlr4.dart';
```

```
import 'dart:io';
```

```
<if(file.genListener)>
```

```
part '<file.grammarName>Listener.dart';
```

```
part '<file.grammarName>BaseListener.dart';
```

```
<endif>
```

```
<if(file.genVisitor)>
```

```
part '<file.grammarName>Visitor.dart';
```

```
part '<file.grammarName>BaseVisitor.dart';
```

```
<endif>
```

```
part '<file.grammarName>Lexer.dart';
```

```
<else>
```

```
import 'package:antlr4/antlr4.dart';
```

```
import 'dart:io';
```

```
<if(file.genListener)>
```

```
import '<file.grammarName>Listener.dart';
```

```
import '<file.grammarName>BaseListener.dart';
```

```
<endif>
```

```
<if(file.genVisitor)>
```

```
import '<file.grammarName>Visitor.dart';
```

```
import '<file.grammarName>BaseVisitor.dart';
```

```
<endif>
```

```
<endif>
```

```
<namedActions.header>
```

```
<parser>
```

```
>>
```

```
ListenerFile(file, header, namedActions) ::= <<
```

```

<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
part of <file.genPackage>;
<else>
import 'package:antlr4/antlr4.dart';

import '<file.parserName>.dart';
<endif>
<header>

/// This abstract class defines a complete listener for a parse tree produced by
/// [<file.parserName>].
abstract class <file.grammarName>Listener extends ParseTreeListener {
<file.listenerNames>: {Iname |
<if(file.listenerLabelRuleNames.(Iname))>
/// Enter a parse tree produced by the [<Iname>]
/// labeled alternative in [file.parserName>.<file.listenerLabelRuleNames.(Iname)>].
<else>
/// Enter a parse tree produced by [<file.parserName>.<Iname>].
<endif>
/// [ctx] the parse tree
void enter<Iname; format="cap">(<Iname; format="cap">Context ctx);
<if(file.listenerLabelRuleNames.(Iname))>
/// Exit a parse tree produced by the [<Iname>]
/// labeled alternative in [<file.parserName>.<file.listenerLabelRuleNames.(Iname)>].
<else>
/// Exit a parse tree produced by [<file.parserName>.<Iname>].
<endif>
/// [ctx] the parse tree
void exit<Iname; format="cap">(<Iname; format="cap">Context ctx);}; separator="\n">
}
>>

```

```

BaseListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
part of <file.genPackage>;
<else>
import 'package:antlr4/antlr4.dart';

import '<file.parserName>.dart';
import '<file.grammarName>Listener.dart';
<endif>

<header>

```

```

/// This class provides an empty implementation of [<file.grammarName>Listener],
/// which can be extended to create a listener which only needs to handle

```

```

/// a subset of the available methods.
class <file.grammarName>BaseListener implements <file.grammarName>Listener {
<file.listenerNames:{ lname |

/// The default implementation does nothing.
@override
void enter<lname; format="cap">(<lname; format="cap">Context ctx) {}

/// The default implementation does nothing.
@override
void exit<lname; format="cap">(<lname; format="cap">Context ctx) {}}; separator="\n">

/// The default implementation does nothing.
@override
void enterEveryRule(ParserRuleContext ctx) {}

/// The default implementation does nothing.
@override
void exitEveryRule(ParserRuleContext ctx) {}

/// The default implementation does nothing.
@override
void visitTerminal(TerminalNode node) {}

/// The default implementation does nothing.
@override
void visitErrorNode(ErrorNode node) {}
}

>>

```

```

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
part of <file.genPackage>;
<else>
import 'package:antlr4/antlr4.dart';

import '<file.parserName>.dart';
<endif>
<header>

/// This abstract class defines a complete generic visitor for a parse tree
/// produced by [<file.parserName>].
///
/// [T] is the return type of the visit operation. Use `void` for
/// operations with no return type.
abstract class <file.grammarName>Visitor<T> extends ParseTreeVisitor<T> {

```

```

<file.visitorNames:{Iname |
<if(file.visitorLabelRuleNames.(Iname))>
/// Visit a parse tree produced by the { @code <Iname>\}
/// labeled alternative in { @link <file.parserName>#<file.visitorLabelRuleNames.(Iname)>\}.
<else>
/// Visit a parse tree produced by [<file.parserName>.<Iname>].
<endif>
/// [ctx] the parse tree.
/// Return the visitor result.
T visit<Iname; format="cap">(<Iname; format="cap">Context ctx);}; separator="\n">
}
>>

BaseVisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
part of <file.genPackage>;
<else>
import 'package:antlr4/antlr4.dart';

import '<file.parserName>.dart';
import '<file.grammarName>Visitor.dart';
<endif>
<header>

/// This class provides an empty implementation of [<file.grammarName>Visitor],
/// which can be extended to create a visitor which only needs to handle
/// a subset of the available methods.
///
/// [T] is the return type of the visit operation. Use `void` for
/// operations with no return type.
class <file.grammarName>BaseVisitor<T> extends ParseTreeVisitor<T> implements
<file.grammarName>Visitor<T> {
  <file.visitorNames:{Iname |
  /// The default implementation returns the result of calling
  /// [visitChildren] on [ctx].
  @override
  T visit<Iname; format="cap">(<Iname; format="cap">Context ctx) => visitChildren(ctx);}; separator="\n">
  }
  >>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
// Generated from <grammarFileName> by ANTLR <ANTLRVersion>
// ignore_for_file: unused_import, unused_local_variable, prefer_single_quotes
>>

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>

```

>>

```
Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
<if(namedActions.definitions)><namedActions.definitions><endif>
<if(parser.rules)>
const int <parser.rules:{r | RULE_<r.name> = <r.index>}; separator=", ", wrap, anchor>;
<endif>
class <parser.name> extends <superClass; null="Parser"> {
static final checkVersion = () => RuntimeMetaData.checkVersion('<file.ANTLRVersion>',
RuntimeMetaData.VERSION);
static const int TOKEN_EOF = IntStream.EOF;

static final List<DFA> _decisionToDFA = List.generate(
    _ATN.numberOfDecisions, (i) => DFA(_ATN.getDecisionState(i), i));
static final PredictionContextCache _sharedContextCache = PredictionContextCache();
<if(parser.tokens)>
static const int <parser.tokens:{k | TOKEN_<k> = <parser.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>

@Override
final List<String> ruleNames = [
    <parser.ruleNames:{r | '<r>'}; separator=", ", wrap, anchor>
];

<vocabulary(parser.literalNames, parser.symbolicNames)>

@Override
String get grammarFileName => '<parser.grammarFileName>';

@Override
String get serializedATN => _serializedATN;

@Override
ATN getATN() {
return _ATN;
}

<namedActions.members>
<parser:(ctor)()>
<funcs; separator="\n">

<if(sempredFuncs)>
@Override
bool sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
switch (ruleIndex) {
    <parser.sempredFuncs.values:{f}
case <f.ruleIndex>:
return _<f.name>_sempred(_localctx, predIndex);}; separator="\n">
}
```

```

    }
    return true;
}
<sempredFuncs.values; separator="\n">
<endif>

<atn>
}
<funcs:{ func | <if(func.ruleCtx)><func.ruleCtx><endif>}; separator="\n\n">

<funcs:{ func | <if(func.altLabelCtxs)><func.altLabelCtxs:{1 | <func.altLabelCtxs.(l)>};
separator="\n\n"><endif>}>
>>

vocabulary(literalNames, symbolicNames) ::= <<
static final List<String> _LITERAL_NAMES = [
    <literalNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
];
static final List<String> _SYMBOLIC_NAMES = [
    <symbolicNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
];
static final Vocabulary VOCABULARY = VocabularyImpl(_LITERAL_NAMES, _SYMBOLIC_NAMES);

@Override
Vocabulary get vocabulary {
    return VOCABULARY;
}
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
void action(RuleContext _localctx, int ruleIndex, int actionIndex) {
    switch (ruleIndex) {
        <recog.actionFuncs.values:{f}
    case <f.ruleIndex>:
        _<f.name>_action(_localctx, actionIndex);
        break;}; separator="\n">
    }
}
<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>
bool sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
    switch (ruleIndex) {
        <recog.sempredFuncs.values:{f}
    case <f.ruleIndex>:
        return _<f.name>_sempred(_localctx, predIndex);}; separator="\n">
    }
}

```

```

return true;
}
<sempredFuncs.values; separator="\n">
<endif>
>>

parser_ctor(p) ::= <<
<p.name>(TokenStream input) : super(input) {
  interpreter = ParserATNSimulator(this, _ATN, _decisionToDFA, _sharedContextCache);
}
>>

/// This generates a private method since the actionIndex is generated, making an
/// overriding implementation impossible to maintain.
RuleActionFunction(r, actions) ::= <<
void _<r.name>_action(<r.ctxType> _localctx, int actionIndex) {
  switch (actionIndex) {
    <actions:{index|case <index>: <actions.(index)> break;}; separator="\n">
  }
}
>>

/// This generates a private method since the predIndex is generated, making an
/// overriding implementation impossible to maintain.
RuleSempredFunction(r, actions) ::= <<
bool _<r.name>_sempred(<r.ctxType> _localctx, int predIndex) {
  switch (predIndex) {
    <actions:{index|case <index>: return <actions.(index)>;}; separator="\n">
  }
  return true;
}
>>

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<

<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else><endif><currentRule.ctxType>
<currentRule.name><(<args; separator=", ">) {
  dynamic _localctx = <currentRule.ctxType>(context, state<currentRule.args:{a | , <a.name>}>);
  enterRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>);
  <namedActions.init>
  <locals; separator="\n">
  try {
  <if(currentRule.hasLookaheadBlock)>
    int _alt;
  <endif>
  <code>
  <postamble; separator="\n">

```

```

    <namedActions.after>
  } <if(exceptions)> <exceptions; separator="\n"><else>on RecognitionException catch (re) {
    _localctx.exception = re;
    errorHandler.reportError(this, re);
    errorHandler.recover(this, re);
  }<endif> finally {
    <finallyAction>
    exitRule();
  }
  return _localctx;
}
>>

```

```

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,
namedActions,finallyAction,postamble) ::=
<<

```

```

<currentRule.ctxType> <currentRule.name>([int _p = 0]<args: {a | , <a>}>) {
  final _parentctx = context;
  final _parentState = state;
  dynamic _localctx = <currentRule.ctxType>(context, _parentState<currentRule.args: {a | , <a.name>}>);
  var _prevctx = _localctx;
  var _startState = <currentRule.startState>;
  enterRecursionRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>, _p);
  <namedActions.init>
  <locals; separator="\n">
  try {
  <if(currentRule.hasLookaheadBlock)>
    int _alt;
  <endif>
  <code>
  <postamble; separator="\n">
  <namedActions.after>
  } on RecognitionException catch (re) {
    _localctx.exception = re;
    errorHandler.reportError(this, re);
    errorHandler.recover(this, re);
  } finally {
    <finallyAction>
    unrollRecursionContexts(_parentctx);
  }
  return _localctx;
}
>>

```

```

CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>_localctx = <currentOuterMostAltCodeBlock.altLabel>;
format="cap">Context(_localctx);<endif>

```

```

enterOuterAlt(_localctx, <currentOuterMostAltCodeBlock.alt.altNum>);
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

```

```

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
>>

```

```

LL1AltBlock(choice, preamble, alts, error) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
<if(choice.label)><labelref(choice.label)> = tokenStream.LT(1);<endif>
<preamble; separator="\n">
switch (tokenStream.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
<error>
}
>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
switch (tokenStream.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
break;
}
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
<preamble; separator="\n">
if (<expr>) {
<alts; separator="\n">
}
<!else if ( !(<followExpr> ) ) <error>!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
state = <choice.stateNumber>;

```

```

errorHandler.sync(this);
<preamble; separator="\n">
while (<loopExpr>) {
  <alts; separator="\n">
  state = <choice.loopBackStateNumber>;
  errorHandler.sync(this);
  <iteration>
}
>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
state = <choice.blockStartStateNumber>; <! alt block decision !>
errorHandler.sync(this);
<preamble; separator="\n">
do {
  <alts; separator="\n">
  state = <choice.stateNumber>; <! loopback/exit decision !>
  errorHandler.sync(this);
  <iteration>
} while (<loopExpr>);
>>

```

```
// LL(*) stuff
```

```

AltBlock(choice, preamble, alts, error) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
<if(choice.label)><labelref(choice.label)> = tokenStream.LT(1);<endif>
<preamble; separator="\n">
switch (interpreter.adaptivePredict(tokenStream, <choice.decision>, context)) {
  <alts:{ alt |
  case <i>:
    <alt>
    break;}; separator="\n">
}
>>

```

```

OptionalBlock(choice, alts, error) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
switch (interpreter.adaptivePredict(tokenStream, <choice.decision>, context)) {
  <alts:{ alt |
  case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
    break;}; separator="\n">
}
>>

```

```

StarBlock(choice, alts, sync, iteration) ::= <<
state = <choice.stateNumber>;
errorHandler.sync(this);
_alt = interpreter.adaptivePredict(tokenStream, <choice.decision>, context);
while (_alt != <choice.exitAlt> && _alt != ATN.INVALID_ALT_NUMBER) {
if (_alt == 1<if(!choice.ast.greedy)> + 1<endif>) {
    <iteration>
    <alts> <! should only be one !>
}
state = <choice.loopBackStateNumber>;
errorHandler.sync(this);
_alt = interpreter.adaptivePredict(tokenStream, <choice.decision>, context);
}
>>

```

```

PlusBlock(choice, alts, error) ::= <<
state = <choice.blockStartStateNumber>; <! alt block decision !>
errorHandler.sync(this);
_alt = 1<if(!choice.ast.greedy)>+1<endif>;
do {
switch (_alt) {
    <alts:{alt|
case <i><if(!choice.ast.greedy)> + 1<endif>:
    <alt>
break;}; separator="\n">
default:
    <error>
}
state = <choice.loopBackStateNumber>; <! loopback/exit decision !>
errorHandler.sync(this);
_alt = interpreter.adaptivePredict(tokenStream, <choice.decision>, context);
} while (_alt != <choice.exitAlt> && _alt != ATN.INVALID_ALT_NUMBER);
>>

```

```

Sync(s) ::= "sync(<s.expecting.name>);"

```

```

ThrowNoViableAlt(t) ::= "throw NoViableAltException(this);"

```

```

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">
>>

```

```

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>

```

```

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({ <offsetShift(s.varName, bits.shift)>})> && ((BigInt.one \<< <offsetShift(s.varName,
bits.shift)>) & (<bits.ttypes:{ ttype | (BigInt.one \<< <offsetShift({TOKEN_<ttype>}, bits.shift)>)}; separator=" |
">)) != BigInt.zero)
%>

isZero ::= [
"0":true,
default:false
]

offsetShift(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ ttype | <s.varName> == TOKEN_<ttype>}; separator=" || ">
%>

cases(ttypes) ::= <<
<types:{ t | case TOKEN_<t>:}; separator="\n">
>>

InvokeRule(r, argExprsChunks) ::= <<
state = <r.stateNumber>;
<if(r.labels)><r.labels:{1 | <labelref(l)> =
}><endif><r.name><(<if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)><endif><endif><argExprsChunks>
);
>>

MatchToken(m) ::= <<
state = <m.stateNumber>;
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>match(TOKEN_<m.name>);
>>

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

CommonSetStuff(m, expr, capture, invert) ::= <<
state = <m.stateNumber>;
<if(m.labels)><m.labels:{1 | <labelref(l)> = }>tokenStream.LT(1);<endif>
<capture>
if (<if(invert)><m.varName> \<= 0 || <else>!<endif><expr>) {
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>errorHandler.recoverInline(this);
} else {

```

```

if ( tokenStream.LA(1)==IntStream.EOF ) matchedEOF = true;
errorHandler.reportMatch(this);
consume();
}
>>

Wildcard(w) ::= <<
state = <w.stateNumber>;
<if(w.labels)><w.labels:{1 | <labelref(l)> = }><endif>matchWildcard();
>>

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
state = <p.stateNumber>;
if (!(<chunks>)) {
    throw FailedPredicateException(this, <p.predicate><if(failChunks)>, <failChunks><elseif(p.msg)>,
    <p.msg><endif>);
}
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
    <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "skip();"
LexerMoreCommand() ::= "more();"
LexerPopModeCommand() ::= "popMode();"

LexerTypeCommand(arg, grammar) ::= "type = <arg>);"
LexerChannelCommand(arg, grammar) ::= "channel = <arg>);"
LexerModeCommand(arg, grammar) ::= "mode_ = <arg>);"
LexerPushModeCommand(arg, grammar) ::= "pushMode(<arg>);"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "_localctx.<a.name>"
LocalRef(a) ::= "_localctx.<a.name>"
RetValRef(a) ::= "_localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"

```

```

/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>";

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>.<t.label>?.text"
TokenPropertyRef_type(t) ::= "<ctx(t)>.<t.label> != null ? <ctx(t)>.<t.label>.type : 0"
TokenPropertyRef_line(t) ::= "<ctx(t)>.<t.label> != null ? <ctx(t)>.<t.label>.line : 0"
TokenPropertyRef_pos(t) ::= "<ctx(t)>.<t.label> != null ? <ctx(t)>.<t.label>.charPositionInLine : 0"
TokenPropertyRef_channel(t) ::= "<ctx(t)>.<t.label> != null ? <ctx(t)>.<t.label>.channel : 0"
TokenPropertyRef_index(t) ::= "<ctx(t)>.<t.label> != null ? <ctx(t)>.<t.label>.tokenIndex : 0"
TokenPropertyRef_int(t) ::= "<ctx(t)>.<t.label> != null ? int.parse(<ctx(t)>.<t.label>.text) : 0"

RulePropertyRef_start(r) ::= "<ctx(r)>.<r.label>?.start"
RulePropertyRef_stop(r) ::= "<ctx(r)>.<r.label>?.stop"
RulePropertyRef_text(r) ::= "<ctx(r)>.<r.label> != null ? tokenStream.getTextRange(<ctx(r)>.<r.label>.start,
<ctx(r)>.<r.label>.stop) : null)"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "this"

ThisRulePropertyRef_start(r) ::= "_localctx.start"
ThisRulePropertyRef_stop(r) ::= "_localctx.stop"
ThisRulePropertyRef_text(r) ::= "tokenStream.getTextRange(_localctx.start, tokenStream.LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "_localctx"
ThisRulePropertyRef_parser(r) ::= "this"

NonLocalAttrRef(s) ::= "(getInvokingContext(<s.ruleIndex>) as <s.ruleName; format=\"cap\">Context).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::=
"(getInvokingContext(<s.ruleIndex>) as <s.ruleName; format=\"cap\">Context).<s.name> = <rhsChunks>";

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.add(<labelref(a.label)>);"

TokenDecl(t) ::= "<TokenLabelType()> <t.name>"
TokenTypeDecl(t) ::= "int <t.name>";
TokenListDecl(t) ::= "List<Token> <t.name> = List<Token>()"
RuleContextDecl(r) ::= "<r.ctxName> <r.name>"
RuleContextListDecl(rdecl) ::= "List<<rdecl.ctxName>> <rdecl.name> = List<<rdecl.ctxName>>()"

ContextTokenGetterDecl(t) ::= <<
TerminalNode <t.name>() => getToken(<parser.name>.TOKEN_<t.name>, 0);
>>
ContextTokenListGetterDecl(t) ::= <<
List<TerminalNode> <t.name>s() => getTokens(<parser.name>.TOKEN_<t.name>);
>>

```

```

ContextTokenListIndexedGetterDecl(t) ::= <<
TerminalNode <t.name>(int i) => getToken(<parser.name>.TOKEN_<t.name>, i);
>>

ContextRuleGetterDecl(r) ::= <<
<r.ctxName> <r.name>() => getRuleContext\<<r.ctxName>\>(0);
>>

ContextRuleListGetterDecl(r) ::= <<
List\<<r.ctxName>\> <r.name>s() => getRuleContexts\<<r.ctxName>\>(0);
>>

ContextRuleListIndexedGetterDecl(r) ::= <<
<r.ctxName> <r.name>(int i) => getRuleContext\<<r.ctxName>\>(i);
>>

LexerRuleContext() ::= "RuleContext"

// The rule context name is the rule followed by a suffix; e.g.,
// r becomes rContext.
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenName>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "<d.varName> = tokenStream.LT(1);"
CaptureNextTokenType(d) ::= "<d.varName> = tokenStream.LA(1);"

StructDecl(struct,ctorAttrs,attrs,getters,dispatchMethods,interfaces,extensionMembers)
 ::= <<
class <struct.name> extends
<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif><if(interfaces)> implements
<interfaces; separator=", "><endif> {
<attrs:{a | <a>;}; separator="\n">
<getters:{g | <g>;}; separator="\n">
<struct.name>([ParserRuleContext parent, int invokingState<ctorAttrs:{a | , <a>}>]) : super(parent,
invokingState)<if(struct.ctorAttrs)> {
<struct.ctorAttrs:{a | this.<a.name> = <a.name>;}; separator="\n">
}<else>;<endif>

@Override
int get ruleIndex => RULE_<struct.derivedFromName>;
<if(struct.provideCopyFrom)><! don't need copy unless we have subclasses !>
@Override
void copyFrom(<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif> ctx) {
super.copyFrom(ctx);
<struct.attrs:{a | this.<a.name> = (ctx as <struct.name>).<a.name>;}; separator="\n">
}
<endif>

```

```

<dispatchMethods; separator="\n">
<extensionMembers; separator="\n">
}
>>

```

```

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
class <struct.name> extends <struct.parentRule; format="cap">Context {
  <attrs:{a | <a>;}; separator="\n">
  <getters:{g | <g>;}; separator="\n">
  <struct.name>(<struct.parentRule; format="cap">Context ctx) { copyFrom(ctx); }
  <dispatchMethods; separator="\n">
}
>>

```

```

ListenerDispatchMethod(method) ::= <<
@override
void <if(method.isEnter)>enter<else>exit<endif>Rule(ParseTreeListener listener) {
  if (listener is <parser.grammarName>Listener)
  listener.<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">(this);
}
>>

```

```

VisitorDispatchMethod(method) ::= <<
@override
T accept\<T>(ParseTreeVisitor\<T> visitor) {
  if (visitor is <parser.grammarName>Visitor\<T>) {
    return visitor.visit<struct.derivedFromName; format="cap">(this);
  } else {
    return visitor.visitChildren(this);
  }
}
>>

```

```

AttributeDecl(d) ::= "<d.type> <d.name><if(d.initValue)> = <d.initValue><endif>"

```

```

// If we don't know location of label def x, use this template
labelref(x) ::= "<if(!x.isLocal)>_localctx.<endif><x.name>"

```

```

// For any action chunk, what is correctly-typed context struct ptr?
ctx(actionChunk) ::= "_localctx"

```

```

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "precpred(context, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name> = $<src>.<name>;"
recRuleSetStopToken() ::= "context.stop = tokenStream.LT(-1);"

```

```

recRuleAltStartAction(ruleName, ctxName, label, isListLabel) ::= <<
_localctx = <ctxName>Context(_parentctx, _parentState);

```

```

<if(label)>
<if(isListLabel)>
_localctx.<label>.add(_prevctx);
<else>
_localctx.<label> = _prevctx;
<endif>
<endif>
pushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
>>

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
_localctx = <currentAltLabel; format="cap">Context(new <ruleName; format="cap">Context(_parentctx,
_parentState));
<if(label)>
<if(isListLabel)>
_localctx.<label>.add(_prevctx);
<else>
_localctx.<label> = _prevctx;
<endif>
<endif>
pushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
>>

recRuleReplaceContext(ctxName) ::= <<
_localctx = <ctxName>Context(_localctx);
context = _localctx;
_prevctx = _localctx;
>>

recRuleSetPrevCtx() ::= <<
if (parseListeners != null) triggerExitRuleEvent();
_prevctx = _localctx;
>>

LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
<if(lexerFile.genPackage)>
part of <lexerFile.genPackage>;
<else>
import 'package:antlr4/antlr4.dart';
<endif>
<namedActions.header>

<lexer>
>>

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<

```

```

<if(namedActions.definitions)><namedActions.definitions><endif>

class <lexer.name> extends <superClass; null="Lexer"> {
    static final checkVersion = () => RuntimeMetaData.checkVersion('<lexerFile.ANTLRVersion>',
RuntimeMetaData.VERSION);

    static final List<DFA> _decisionToDFA = List.generate(
        _ATN.numberOfDecisions, (i) => DFA(_ATN.getDecisionState(i), i));
    static final PredictionContextCache _sharedContextCache = PredictionContextCache();
    <if(lexer.tokens)>
    static const int
        <lexer.tokens:{k | TOKEN_<k> = <lexer.tokens.(k)>}; separator=", ", wrap, anchor>;
    <endif>
    <if(lexer.channels)>
    static const int
        <lexer.channels:{c | <c> = <lexer.channels.(c)>}; separator=", ", wrap, anchor>;
    <endif>
    <if(rest(lexer.modes)>
    static const int
        <rest(lexer.modes){m | <m> = <i>}; separator=", ", wrap, anchor>;
    <endif>

    @override
    final List<String> channelNames = [
        'DEFAULT_TOKEN_CHANNEL', 'HIDDEN'<if (lexer.channels)>, <lexer.channels:{c| '<c>'}; separator=", ",
wrap, anchor><endif>
    ];

    @override
    final List<String> modeNames = [
        <lexer.modes:{m| '<m>'}; separator=", ", wrap, anchor>
    ];

    @override
    final List<String> ruleNames = [
        <lexer.ruleNames:{r | '<r>'}; separator=", ", wrap, anchor>
    ];

    <vocabulary(lexer.literalNames, lexer.symbolicNames)>

    <namedActions.members>

    <lexer.name>(CharStream input) : super(input) {
        interpreter = LexerATNSimulator(_ATN, _decisionToDFA, _sharedContextCache, recog: this);
    }

    @override
    String get serializedATN => _serializedATN;

```

```

@override
String get grammarFileName => '<lexer.grammarFileName>';

@override
ATN getATN() { return _ATN; }

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>
<atn>
}
>>

SerializedATN(model) ::= <<
<if(rest(model.segments))>
<! requires segmented representation !>
static const int _serializedATNSegments = <length(model.segments)>;
<model.segments:{segment|static final String _serializedATNSegment<i0> =
'<segment; wrap={'\n<t>'}>; separator="\n">
static final String _serializedATN = [
  <model.segments:{segment | _serializedATNSegment<i0>}; separator=",\n">
].join();
<else>
<! only one segment, can be inlined !>
static const String _serializedATN = '<model.serialized; wrap={'\n<t>'}>;
<endif>
static final ATN _ATN =
  ATNDeserializer().deserialize(_serializedATN.codeUnits);
>>

/// Using a type to init value map, try to init a type; if not in table
/// must be an object, default value is "null".
initValue(typeName) ::= <<
<dartTypeInitMap.(typeName)>
>>

codeFileExtension() ::= ".dart"

```

Found in path(s):

```

* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/Dart/Dart.stg

```

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```

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*/

```

```

/** How to generate rules derived from left-recursive rules.
* These rely on recRuleAltPredicate(),
* recRuleArg(), recRuleSetResultAction(), recRuleSetReturnAction()
* templates in main language.stg
*/

```

```
group LeftRecursiveRules;
```

```
recRule(ruleName, argName, primaryAlts, opAlts, setResultAction,
        userRetvals, leftRecursiveRuleRefLabels) ::=
```

```
<<
<ruleName><if(userRetvals)> returns [<userRetvals>]<endif>
: ( { } <primaryAlts: { alt | <alt.altText> }; separator="\n    | ">
  )
  (
    <opAlts; separator="\n    | ">
  )*
;
>>

```

```
recRuleAlt(alt, precOption, opPrec, pred) ::= <<
{<pred>}?<<precOption>=<opPrec>|> <alt.altText>
>>

```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/LeftRecursiveRules.stg

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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/codegen/Cpp/Cpp.stg

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*/

```

```

/** ANTLR tool checks output templates are compatible with tool code generation.

```

```

* For now, a simple string match used on x.y of x.y.z scheme.
* Must match Tool.VERSION during load to templates.
*
* REQUIRED.
*/

```

```

javascriptTypeInitMap ::= [
  "bool":"false",
  "int":"0",
  "float":"0.0",
  "str": "",
  default:"{}" // anything other than a primitive type is an object
]

```

```

// args must be <object-model-object>, <fields-resulting-in-STs>

```

```

ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
import antlr4 from 'antlr4';
<if(file.genListener)>
import <file.grammarName>Listener from './<file.grammarName>Listener.js';
<endif>
<if(file.genVisitor)>
import <file.grammarName>Visitor from './<file.grammarName>Visitor.js';
<endif>

```

```

<namedActions.header>
<parser>
>>

ListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
import antlr4 from 'antlr4';

// This class defines a complete listener for a parse tree produced by <file.parserName>.
export default class <file.grammarName>Listener extends antlr4.tree.ParseTreeListener {

<file.listenerNames:{lname |
// Enter a parse tree produced by <file.parserName>#<lname>.
enter<lname; format="cap">(ctx) {
\}

// Exit a parse tree produced by <file.parserName>#<lname>.
exit<lname; format="cap">(ctx) {
\}

}; separator="\n">

}
>>

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
import antlr4 from 'antlr4';

// This class defines a complete generic visitor for a parse tree produced by <file.parserName>.

export default class <file.grammarName>Visitor extends antlr4.tree.ParseTreeVisitor {

<file.visitorNames:{lname |
// Visit a parse tree produced by <file.parserName>#<lname>.
visit<lname; format="cap">(ctx) {
    return this.visitChildren(ctx);
\}

}; separator="\n">

}
>>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
// Generated from <grammarFileName; format="java-escape"> by ANTLR <ANTLRVersion>

```

```

// jshint ignore: start
>>

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<if(superClass)>
import <superClass> from './<superClass>.js';
<endif>

<atn>

const atn = new antlr4.atn.ATNDeserializer().deserialize(serializedATN);

const decisionsToDFA = atn.decisionToState.map( (ds, index) => new antlr4.dfa.DFA(ds, index) );

const sharedContextCache = new antlr4.PredictionContextCache();

export default class <parser.name> extends <superClass; null="antlr4.Parser"> {

  static grammarFileName = "<parser.grammarFileName; format="java-escape">";
  static literalNames = [ <parser.literalNames:{t | <t>}; null="null", separator=", ", wrap, anchor> ];
  static symbolicNames = [ <parser.symbolicNames:{t | <t>}; null="null", separator=", ", wrap, anchor> ];
  static ruleNames = [ <parser.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor> ];

  constructor(input) {
    super(input);
    this._interp = new antlr4.atn.ParserATNSimulator(this, atn, decisionsToDFA, sharedContextCache);
    this.ruleNames = <parser.name>.ruleNames;
    this.literalNames = <parser.name>.literalNames;
    this.symbolicNames = <parser.name>.symbolicNames;
    <namedActions.members>
  }

  get atn() {
    return atn;
  }

  <if(sempredFuncs)>
  sempred(localctx, ruleIndex, predIndex) {
    switch(ruleIndex) {
      <parser.sempredFuncs.values:{f | case <f.ruleIndex>:
return this.<f.name>_sempred(localctx, predIndex);}; separator="\n">
      default:
        throw "No predicate with index:" + ruleIndex;
    }
  }
  <sempredFuncs.values; separator="\n">
<endif>

```

```

<funcs; separator="\n">

}

<parser.name>.EOF = antlr4.Token.EOF;
<if(parser.tokens)>
<parser.tokens:{k | <parser.name>.<k> = <parser.tokens.(k)>;}; separator="\n", wrap, anchor>
<endif>

<if(parser.rules)>
<parser.rules:{r | <parser.name>.RULE_<r.name> = <r.index>;}; separator="\n", wrap, anchor>
<endif>

<funcs:{f | <ruleContexts(f)>;}; separator="\n">

<! Define fields of this parser to export the context classes !>
<parser.funcs:{f | <parser.name>.<f.ctxType> = <f.ctxType>; }; separator="\n">

>>

ruleContexts(currentRule) ::= <<
<currentRule.ruleCtx>

<currentRule.altLabelCtxs:{l | <currentRule.altLabelCtxs.(l)>;}; separator="\n">
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
<lexer.name>.prototype.action = function(localctx, ruleIndex, actionIndex) {
switch (ruleIndex) {
<recog.actionFuncs.values:{f}
case <f.ruleIndex>:
this.<f.name>_action(localctx, actionIndex);
break;}; separator="\n">
default:
throw "No registered action for:" + ruleIndex;
}
};

<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>
<lexer.name>.prototype.sempred = function(localctx, ruleIndex, predIndex) {
switch (ruleIndex) {
<recog.sempredFuncs.values:{f} case <f.ruleIndex>:
return this.<f.name>_sempred(localctx, predIndex);}; separator="\n">
default:

```

```

        throw "No registered predicate for:" + ruleIndex;
    }
};

<sempredFuncs.values; separator="\n">
<endif>
>>

/* This generates a private method since the actionIndex is generated, making an
 * overriding implementation impossible to maintain.
 */
RuleActionFunction(r, actions) ::= <<

<lexer.name>.prototype.<r.name>_action = function(localctx , actionIndex) {
    switch (actionIndex) {
    <actions: {index|
    case <index>:
    <actions.(index)>
    break;}; separator="\n">
    default:
        throw "No registered action for:" + actionIndex;
    }
};
>>

/* This generates a private method since the predIndex is generated, making an
 * overriding implementation impossible to maintain.
 */
RuleSempredFunction(r, actions) ::= <<
<if (r.factory.g.lexer)><lexer.name>.prototype.<r.name>_sempred =
function<else><r.name>_sempred<endif>(localctx, predIndex) {
    switch(predIndex) {
    <actions: {index| case <index>:
    return <actions.(index)>;}; separator="\n">
    default:
        throw "No predicate with index:" + predIndex;
    }
};
>>

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<

<currentRule.name><(currentRule.args: {a | <a.name>}; separator=", ">) {
    let localctx = new <currentRule.ctxType>(this, this._ctx, this.state<currentRule.args: {a | , <a.name>}>);

```

```

this.enterRule(localctx, <currentRule.startState>, <parser.name>.RULE_<currentRule.name>);
<namedActions.init>
<locals; separator="\n">
try {
  <code>
  <postamble; separator="\n">
  <namedActions.after>
}<if(exceptions)>
<exceptions; separator="\n">
<else> catch (re) {
  if(re instanceof antlr4.error.RecognitionException) {
    localctx.exception = re;
    this._errHandler.reportError(this, re);
    this._errHandler.recover(this, re);
  } else {
    throw re;
  }
}<endif> finally {
  <finallyAction>
  this.exitRule();
}
return localctx;
}

```

>>

```

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,
  namedActions,finallyAction,postamble) ::=

```

<<

```

<currentRule.name>(<_p<if(currentRule.args)>, <args:{ a | , <a>}><endif>) {
  if(<_p===undefined> {
    <_p = 0;
  }
  const <_parentctx = this._ctx;
  const <_parentState = this.state;
  let localctx = new <currentRule.ctxType>(this, this._ctx, <_parentState<args:{ a | , <a.name>}>>);
  let <_prevctx = localctx;
  const <_startState = <currentRule.startState>;
  this.enterRecursionRule(localctx, <currentRule.startState>, <parser.name>.RULE_<currentRule.name>, <_p);
  <namedActions.init>
  <locals; separator="\n">
  try {
    <code>
    <postamble; separator="\n">
    <namedActions.after>
  } catch( error) {
    if(error instanceof antlr4.error.RecognitionException) {

```

```

        localctx.exception = error;
        this._errHandler.reportError(this, error);
        this._errHandler.recover(this, error);
    } else {
        throw error;
    }
} finally {
    <finallyAction>
    this.unrollRecursionContexts(_parentctx)
}
return localctx;
}

```

>>

```

CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>localctx = new <currentOuterMostAltCodeBlock.altLabel;
format="cap">Context(this, localctx);<endif>
this.enterOuterAlt(localctx, <currentOuterMostAltCodeBlock.alt.altNum>);
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

```

```

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
>>

```

```

LL1AltBlock(choice, preamble, alts, error) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
<if(choice.label)><labelref(choice.label)> = this._input.LT(1);<endif>
<preamble; separator="\n">
switch(this._input.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
    <alt>
    break;}; separator="\n">
default:
    <error>
}
>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
switch (this._input.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
    <alt>

```

```

break;}; separator="\n">
default:
break;
}
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
<preamble; separator="\n">
if(<expr>) {
    <alts; separator="\n">
}
<!else if ( !(<followExpr> ) <error>!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
<preamble; separator="\n">
while(<loopExpr>) {
    <alts; separator="\n">
    this.state = <choice.loopBackStateNumber>;
    this._errHandler.sync(this);
    <iteration>
}
>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
this.state = <choice.blockStartStateNumber>; <! alt block decision !>
this._errHandler.sync(this);
<preamble; separator="\n">
do {
    <alts; separator="\n">
    this.state = <choice.stateNumber>; <! loopback/exit decision !>
    this._errHandler.sync(this);
    <iteration>
} while(<loopExpr>);
>>

```

```
// LL(*) stuff
```

```

AltBlock(choice, preamble, alts, error) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
<if(choice.label)><labelref(choice.label)> = _input.LT(1)<endif>
<preamble; separator="\n">
var la_ = this._interp.adaptivePredict(this._input,<choice.decision>,this._ctx);

```

```

switch(la_) {
<alts:{alt |
case <i>:
    <alt>
    break;
}; separator="\n">
}
>>

```

```

OptionalBlock(choice, alts, error) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
var la_ = this._interp.adaptivePredict(this._input,<choice.decision>,this._ctx);
<alts:{alt |
if(la_===<i><if(!choice.ast.greedy)>+1<endif>) {
    <alt>
}; separator="\n} else ">
}
>>

```

```

StarBlock(choice, alts, sync, iteration) ::= <<
this.state = <choice.stateNumber>;
this._errHandler.sync(this);
var _alt = this._interp.adaptivePredict(this._input,<choice.decision>,this._ctx)
while(_alt!=<choice.exitAlt> && _alt!=antlr4.atn.ATN.INVALID_ALT_NUMBER) {
    if(_alt===1<if(!choice.ast.greedy)>+1<endif>) {
        <iteration>
        <alts> <! should only be one !>
    }
    this.state = <choice.loopBackStateNumber>;
    this._errHandler.sync(this);
    _alt = this._interp.adaptivePredict(this._input,<choice.decision>,this._ctx);
}
>>

```

```

PlusBlock(choice, alts, error) ::= <<
this.state = <choice.blockStartStateNumber>; <! alt block decision !>
this._errHandler.sync(this);
var _alt = 1<if(!choice.ast.greedy)>+1<endif>;
do {
    switch (_alt) {
    <alts:{alt|
case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
    break;}; separator="\n">
    default:
    <error>

```

```

}
this.state = <choice.loopBackStateNumber>; <! loopback/exit decision !>
this._errHandler.sync(this);
_alt = this._interp.adaptivePredict(this._input,<choice.decision>, this._ctx);
} while ( _alt!=<choice.exitAlt> && _alt!=antlr4.atn.ATN.INVALID_ALT_NUMBER );
>>

Sync(s) ::= "sync(<s.expecting.name>)"

ThrowNoViableAlt(t) ::= "throw new antlr4.error.NoViableAltException(this);"

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">
>>

// Javascript language spec - shift operators are 32 bits long max
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x1f) == 0
>>

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({<offsetShiftVar(s.varName, bits.shift)>}) && ((1 \<< <offsetShiftVar(s.varName,
bits.shift)>) & (<bits.ttypes:{ttype | (1 \<< <offsetShiftType(ttype, bits.shift)>)}); separator=" | ">)) != 0
%>

isZero ::= [
"0":true,
default:false
]

offsetShiftVar(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

offsetShiftType(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><parser.name>.<shiftAmount> - <offset><else><parser.name>.<shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ttype | <s.varName>===<parser.name>.<ttype>}; separator=" || ">
%>

cases(ttypes) ::= <<
<ttypes:{t | case <parser.name>.<t>:}; separator="\n">
>>

```

```

InvokeRule(r, argExprsChunks) ::= <<
this.state = <r.stateNumber>;
<if(r.labels)><r.labels:{1 | <labelref(1)> =
}><endif>this.<r.name><(if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)><endif><endif><argExprsChu
nks>);
>>

```

```

MatchToken(m) ::= <<
this.state = <m.stateNumber>;
<if(m.labels)><m.labels:{1 | <labelref(1)> = }><endif>this.match(<parser.name>.<m.name>);
>>

```

```

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

```

```

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

```

```

CommonSetStuff(m, expr, capture, invert) ::= <<
this.state = <m.stateNumber>;
<if(m.labels)><m.labels:{1 | <labelref(1)> = }>this._input.LT(1);<endif>
<capture>
<if(invert)>if(<m.varName>\<=0 || <expr><else>if(!(<expr>))<endif> {
  <if(m.labels)><m.labels:{1 | <labelref(1)> = }><endif>this._errHandler.recoverInline(this);
}
else {
  this._errHandler.reportMatch(this);
  this.consume();
}
>>

```

```

Wildcard(w) ::= <<
this.state = <w.stateNumber>;
<if(w.labels)><w.labels:{1 | <labelref(1)> = }><endif>this.matchWildcard();
>>

```

```

// ACTION STUFF

```

```

Action(a, foo, chunks) ::= "<chunks>"

```

```

ArgAction(a, chunks) ::= "<chunks>"

```

```

SemPred(p, chunks, failChunks) ::= <<
this.state = <p.stateNumber>;
if (!( <chunks>)) {
  throw new antlr4.error.FailedPredicateException(this, <p.predicate><if(failChunks)>,
<failChunks><elseif(p.msg)>, <p.msg><endif>);
}
>>

```

```

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
  <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "this.skip()"
LexerMoreCommand() ::= "this.more()"
LexerPopModeCommand() ::= "this.popMode()"
LexerTypeCommand(arg, grammar) ::= "this._type = <arg>"
LexerChannelCommand(arg, grammar) ::= "this._channel = <arg>"
LexerModeCommand(arg, grammar) ::= "this._mode = <arg>"
LexerPushModeCommand(arg, grammar) ::= "this.pushMode(<arg>)"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "localctx.<a.name>"
LocalRef(a) ::= "localctx.<a.name>"
RetValRef(a) ::= "localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>"

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>.<t.label>===null ? null : <ctx(t)>.<t.label>.text)"
TokenPropertyRef_type(t) ::= "<ctx(t)>.<t.label> === null ? 0 : <ctx(t)>.<t.label>.type)"
TokenPropertyRef_line(t) ::= "<ctx(t)>.<t.label> === null ? 0 : <ctx(t)>.<t.label>.line)"
TokenPropertyRef_pos(t) ::= "<ctx(t)>.<t.label> === null ? 0 : <ctx(t)>.<t.label>.column)"
TokenPropertyRef_channel(t) ::= "<ctx(t)>.<t.label> === null ? 0 : <ctx(t)>.<t.label>.channel)"
TokenPropertyRef_index(t) ::= "<ctx(t)>.<t.label> === null ? 0 : <ctx(t)>.<t.label>.tokenIndex)"
TokenPropertyRef_int(t) ::= "<ctx(t)>.<t.label> === null ? 0 : parseInt(<ctx(t)>.<t.label>.text))"

RulePropertyRef_start(r) ::= "<ctx(r)>.<r.label>===null ? null : <ctx(r)>.<r.label>.start)"
RulePropertyRef_stop(r) ::= "<ctx(r)>.<r.label>===null ? null : <ctx(r)>.<r.label>.stop)"
RulePropertyRef_text(r) ::= "<ctx(r)>.<r.label>===null ? null : this._input.getText(new
antlr4.Interval(<ctx(r)>.<r.label>.start,<ctx(r)>.<r.label>.stop)))"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "this"

ThisRulePropertyRef_start(r) ::= "localctx.start"

```

```

ThisRulePropertyRef_stop(r) ::= "localctx.stop"
ThisRulePropertyRef_text(r) ::= "this._input.getText(new antlr4.Interval(localctx.start, this._input.LT(-1)))"
ThisRulePropertyRef_ctx(r) ::= "localctx"
ThisRulePropertyRef_parser(r) ::= "this"

```

```

NonLocalAttrRef(s) ::= "this.getInvokingContext(<s.ruleIndex>).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::= "this.getInvokingContext(<s.ruleIndex>).<s.name> = <rhsChunks>"

```

```

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.push(<labelref(a.label)>);"

```

```

TokenDecl(t) ::= "this.<t.name> = null; // <TokenLabelType()>"
TokenTypeDecl(t) ::= "var <t.name> = 0; // <TokenLabelType()> type"
TokenListDecl(t) ::= "this.<t.name> = []; // of <TokenLabelType()>s"
RuleContextDecl(r) ::= "this.<r.name> = null; // <r.ctxName>"
RuleContextListDecl(rdecl) ::= "this.<rdecl.name> = []; // of <rdecl.ctxName>s"

```

```

ContextTokenGetterDecl(t) ::= <<
<t.name>() {
    return this.getToken(<parser.name>.<t.name>, 0);
};
>>

```

```

// should never be called
ContextTokenListGetterDecl(t) ::= <<
<t.name>_list() {
    return this.getTokens(<parser.name>.<t.name>);
}
>>

```

```

ContextTokenListIndexedGetterDecl(t) ::= <<
<t.name> = function(i) {
    if(i===undefined) {
        i = null;
    }
    if(i===null) {
        return this.getTokens(<parser.name>.<t.name>);
    } else {
        return this.getToken(<parser.name>.<t.name>, i);
    }
};
>>

```

```

ContextRuleGetterDecl(r) ::= <<
<r.name>() {
    return this.getTypedRuleContext(<r.ctxName>,0);
};
>>

```

```

// should never be called
ContextRuleListGetterDecl(r) ::= <<
<r.name>_list() {
    return this.getTypedRuleContexts(<parser.name>.<r.ctxName>);
}
>>

ContextRuleListIndexedGetterDecl(r) ::= <<
<r.name> = function(i) {
    if(i===undefined) {
        i = null;
    }
    if(i===null) {
        return this.getTypedRuleContexts(<r.ctxName>);
    } else {
        return this.getTypedRuleContext(<r.ctxName>,i);
    }
};
>>

LexerRuleContext() ::= "RuleContext"

/** The rule context name is the rule followed by a suffix; e.g.,
 * r becomes rContext.
 */
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenName>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "<d.varName> = self._input.LT(1)"
CaptureNextTokenType(d) ::= "<d.varName> = this._input.LA(1);"

StructDecl(struct,ctorAttrs,attrs,getters,dispatchMethods,interfaces,extensionMembers) ::= <<
class <struct.name> extends <if(contextSuperClass)><contextSuperClass><else>antlr4.ParserRuleContext<endif> {

    constructor(parser, parent, invokingState<struct.ctorAttrs:{ a | , <a.name>}> ) {
        if(parent===undefined) {
            parent = null;
        }
        if(invokingState===undefined || invokingState===null) {
            invokingState = -1;
        }
        super(parent, invokingState);
        this.parser = parser;

```

```

    this.ruleIndex = <parser.name>.RULE_<struct.derivedFromName>;
    <attrs:{ a | <a>}; separator="\n">
    <struct.ctorAttrs:{ a | this.<a.name> = <a.name> || null;}; separator="\n">
  }

<getters:{ g | <g>}; separator="\n\n">

<if(struct.provideCopyFrom)> <! don't need copy unless we have subclasses !>
copyFrom(ctx) {
  super.copyFrom(ctx);
  <struct.attrs:{ a | this.<a.name> = ctx.<a.name>}; separator="\n">
}
<endif>
<dispatchMethods; separator="\n">
<extensionMembers; separator="\n">

}

>>

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
class <struct.name> extends <struct.parentRule; format="cap">Context {

  constructor(parser, ctx) {
    super(parser);
    <attrs:{ a | <a>}; separator="\n">
    super.copyFrom(ctx);
  }

  <getters:{ g | <g>}; separator="\n\n">

  <dispatchMethods; separator="\n">

}

<! Define fields of this parser to export this struct/context class !>
<parser.name>.<struct.name> = <struct.name>;

>>

ListenerDispatchMethod(method) ::= <<
<if(method.isEnter)>enter<else>exit<endif>Rule(listener) {
  if(listener instanceof <parser.grammarName>Listener ) {
    listener.<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">(this);
  }
}
}

>>

```

```

VisitorDispatchMethod(method) ::= <<
accept(visitor) {
    if ( visitor instanceof <parser.grammarName>Visitor ) {
        return visitor.visit<struct.derivedFromName; format="cap">(this);
    } else {
        return visitor.visitChildren(this);
    }
}
}

>>

AttributeDecl(d) ::= "this.<d.name> = <if(d.initValue)><d.initValue><else>null<endif>"

/** If we don't know location of label def x, use this template */
labelref(x) ::= "<if(!x.isLocal)>localctx.<endif><x.name>"

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "localctx"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "this.precpred(this._ctx, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name>=<src>.<name>"
recRuleSetStopToken() ::= "this._ctx.stop = this._input.LT(-1);"

recRuleAltStartAction(ruleName, ctxName, label) ::= <<
localctx = new <ctxName>Context(this, _parentctx, _parentState);
<if(label)>localctx.<label> = _prevctx;<endif>
this.pushNewRecursionContext(localctx, _startState, <parser.name>.RULE_<ruleName>);
>>

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
localctx = new <currentAltLabel; format="cap">Context(this, new <ruleName; format="cap">Context(this,
_parentctx, _parentState));
<if(label)>
<if(isListLabel)>
localctx.<label>.push(_prevctx);
<else>
localctx.<label> = _prevctx;
<endif>
<endif>
this.pushNewRecursionContext(localctx, _startState, <parser.name>.RULE_<ruleName>);
>>

recRuleReplaceContext(ctxName) ::= <<
localctx = new <ctxName>Context(this, localctx);
this._ctx = localctx;
_prevctx = localctx;

```

>>

```
recRuleSetPrevCtx() ::= <<
if(this._parseListeners!==null) {
  this.triggerExitRuleEvent();
}
_prevctx = localctx;
>>
```

```
LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
import antlr4 from 'antlr4';
```

```
<namedActions.header>
```

```
<lexer>
```

>>

```
Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
<if(superClass)>
import <superClass> from './<superClass>.js';
<endif>
```

```
<atn>
```

```
const atn = new antlr4.atn.ATNDeserializer().deserialize(serializedATN);
```

```
const decisionsToDFA = atn.decisionToState.map( (ds, index) => new antlr4.dfa.DFA(ds, index) );
```

```
export default class <lexer.name> extends <if(superClass)><superClass><else>antlr4.Lexer<endif> {
```

```
  static grammarFileName = "<lexer.grammarFileName>";
  static channelNames = [ "DEFAULT_TOKEN_CHANNEL", "HIDDEN"<if (lexer.channels)>,
<lexer.channels:{c| "<c>"}; separator=", ", wrap, anchor><endif> ];
  static modeNames = [ <lexer.modes:{m| "<m>"}; separator=", ", wrap, anchor> ];
  static literalNames = [ <lexer.literalNames:{t| <t>}; null="null", separator=", ", wrap, anchor> ];
  static symbolicNames = [ <lexer.symbolicNames:{t| <t>}; null="null", separator=", ", wrap, anchor> ];
  static ruleNames = [ <lexer.ruleNames:{r| "<r>"}; separator=", ", wrap, anchor> ];
```

```
  constructor(input) {
    super(input)
    this._interp = new antlr4.atn.LexerATNSimulator(this, atn, decisionsToDFA, new
antlr4.PredictionContextCache());
    <namedActions.members>
  }
}
```

```

    get atn() {
        return atn;
    }
}

<lexer.name>.EOF = antlr4.Token.EOF;
<if(lexer.tokens)>
<lexer.tokens:{k | <lexer.name>.<k> = <lexer.tokens.(k)>;}; separator="\n", wrap, anchor>
<endif>

<if(lexer.channels)>
<lexer.channels:{c | <lexer.name>.<c> = <lexer.channels.(c)>;}; separator="\n">

<endif>
<if(rest(lexer.modes))>
<rest(lexer.modes):{m | <lexer.name>.<m> = <i>;}; separator="\n">

<endif>

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>

>>

SerializedATN(model) ::= <<
<! only one segment, can be inlined !>

const serializedATN = ["<model.serialized; wrap={",<\n>  ">"].join("");

>>

/** Using a type to init value map, try to init a type; if not in table
 * must be an object, default value is "null".
 */
initValue(typeName) ::= <<
<javacriptTypeInitMap.(typeName)>
>>

codeFileExtension() ::= ".js"

Found in path(s):
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/JavaScript/JavaScript.stg
No license file was found, but licenses were detected in source scan.

/*
 * [The "BSD license"]
 * Copyright (c) 2012-2016 Terence Parr

```

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 \* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF  
 \* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.  
 \*/

```
SwiftTypeInitMap ::= [
  "Int": "0",
  "Int64": "0",
  "Float": "0.0",
  "Double": "0.0",
  "Bool": "false",
  default: "nil" // anything other than a primitive type is an object
]
SwiftTypeMap ::= [
  "int": "Int",
  "float": "Float",
  "long": "Int64",
  "double": "Double",
  "bool": "Bool",
  "boolean": "Bool",
  default : key
]
// args must be <object-model-object>, <fields-resulting-in-STs>

accessLevelOpenOK(obj) ::= "<obj.accessLevel; null=\"open\">"
```

```
accessLevelNotOpen(obj) ::= "<obj.accessLevel; null=\"public\">"
```

```
ParserFile(file, parser, namedActions, contextSuperClass) ::= <<  
<fileHeader(file.grammarFileName, file.ANTLRVersion)>  
<if(file.genPackage)>  
<!package <file.genPackage>;!>  
<endif>  
<namedActions.header>  
import Antlr4  
  
<parser>  
>>
```

```
ListenerFile(file, header, namedActions) ::= <<  
<fileHeader(file.grammarFileName, file.ANTLRVersion)>  
<if(file.genPackage)>  
<!package <file.genPackage>;!>  
<endif>  
<header>  
import Antlr4  
  
/**  
 * This interface defines a complete listener for a parse tree produced by  
 * { @link <file.parserName> }.  
 */  
<accessLevelNotOpen(file)> protocol <file.grammarName>Listener: ParseTreeListener {  
  <file.listenerNames: {lname |  
/**  
<if(file.listenerLabelRuleNames.(lname))>  
 * Enter a parse tree produced by the { @code <lname> }  
 * labeled alternative in { @link <file.parserName>#<file.listenerLabelRuleNames.(lname)> }.  
<else>  
 * Enter a parse tree produced by { @link <file.parserName>#<lname> }.  
<endif>  
- Parameters:  
  - ctx: the parse tree  
*/  
func enter<lname; format="cap">(_ ctx: <file.parserName>.<lname; format="cap">Context)  
/**  
<if(file.listenerLabelRuleNames.(lname))>  
 * Exit a parse tree produced by the { @code <lname> }  
 * labeled alternative in { @link <file.parserName>#<file.listenerLabelRuleNames.(lname)> }.  
<else>  
 * Exit a parse tree produced by { @link <file.parserName>#<lname> }.  
<endif>  
- Parameters:  
  - ctx: the parse tree  
*/
```

```

func exit<lname; format="cap">(_ ctx: <file.parserName>.<lname; format="cap">Context)); separator="\n">
}
>>

BaseListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
<!package <file.genPackage>;!>
<endif>
<header>

import Antlr4

/**
 * This class provides an empty implementation of { @link <file.grammarName>Listener },
 * which can be extended to create a listener which only needs to handle a subset
 * of the available methods.
 */
<accessLevelOpenOK(file)> class <file.grammarName>BaseListener: <file.grammarName>Listener {
    <accessLevelNotOpen(file)> init() { \ }
    <file.listenerNames:{lname |

/**
 * { @inheritDoc\ }
 *
 * \<p>The default implementation does nothing.\</p>
 */
<accessLevelOpenOK(file)> func enter<lname; format="cap">(_ ctx: <file.parserName>.<lname;
format="cap">Context) { \ }
/**
 * { @inheritDoc\ }
 *
 * \<p>The default implementation does nothing.\</p>
 */
<accessLevelOpenOK(file)> func exit<lname; format="cap">(_ ctx: <file.parserName>.<lname;
format="cap">Context) { \ } ; separator="\n">

/**
 * { @inheritDoc\ }
 *
 * \<p>The default implementation does nothing.\</p>
 */
<accessLevelOpenOK(file)> func enterEveryRule(_ ctx: ParserRuleContext) throws { }
/**
 * { @inheritDoc\ }
 *
 * \<p>The default implementation does nothing.\</p>

```

```

*/
<accessLevelOpenOK(file)> func exitEveryRule(_ ctx: ParserRuleContext) throws { }
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
<accessLevelOpenOK(file)> func visitTerminal(_ node: TerminalNode) { }
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
<accessLevelOpenOK(file)> func visitErrorNode(_ node: ErrorNode) { }
}
>>

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
<!package <file.genPackage>;!>
<endif>
<header>
import Antlr4

/**
 * This interface defines a complete generic visitor for a parse tree produced
 * by { @link <file.parserName>}.
 *
 * @param \<T> The return type of the visit operation. Use { @link Void} for
 * operations with no return type.
 */
<accessLevelOpenOK(file)> class <file.grammarName>Visitor\<T>: ParseTreeVisitor\<T> {
  <file.visitorNames:{ lname |
/**
<if(file.visitorLabelRuleNames.(lname))>
 * Visit a parse tree produced by the { @code <lname>}
 * labeled alternative in { @link <file.parserName>#<file.visitorLabelRuleNames.(lname)>}}.
<else>
 * Visit a parse tree produced by { @link <file.parserName>#<lname>}}.
<endif>
- Parameters:
- ctx: the parse tree
- returns: the visitor result
*/
<accessLevelOpenOK(file)> func visit<lname; format="cap">(_ ctx: <file.parserName>.<lname;
format="cap">Context) -> T {
  fatalError(#function + " must be overridden")

```

```

\}
}; separator="\n">
}
>>

```

```

BaseVisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
<!package <file.genPackage>;!>
<endif>
<header>
import Antlr4

/**
 * This class provides an empty implementation of { @link <file.grammarName>Visitor},
 * which can be extended to create a visitor which only needs to handle a subset
 * of the available methods.
 *
 * @param \<T> The return type of the visit operation. Use { @link Void} for
 * operations with no return type.
 */
<accessLevelOpenOK(file)> class <file.grammarName>BaseVisitor\<T>: AbstractParseTreeVisitor\<T> {
  <file.visitorNames:{ lname |
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation returns the result of calling
 * { @link #visitChildren\} on { @code ctx\}.\</p>
 */
  <accessLevelOpenOK(file)> func visit<lname; format="cap">(_ ctx: <file.parserName>.<lname;
format="cap">Context) -> T? { return visitChildren(ctx) \}; separator="\n">
  }
>>

```

```

fileHeader(grammarFileName, ANTLRVersion) ::= <<
// Generated from <grammarFileName; format="java-escape"> by ANTLR <ANTLRVersion>
>>

```

```

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

```

```

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
</*!/@SuppressWarnings({"all", "warnings", "unchecked", "unused", "cast"})!>
<accessLevelOpenOK(parser)> class <parser.name>: <superClass; null="Parser"> {

```

```

  internal static var _decisionToDFA: [DFA] = {
    var decisionToDFA = [DFA]()

```

```

    let length = <parser.name>._ATN.getNumberOfDecisions()
    for i in 0..<length {
        <!-- decisionToDFA[i] = DFA(<parser.name>._ATN.getDecisionState(i)!, i);!>
        decisionToDFA.append(DFA(<parser.name>._ATN.getDecisionState(i)!, i))
    }
    return decisionToDFA
}()

internal static let _sharedContextCache = PredictionContextCache()

<if(parser.tokens)>
<accessLevelNotOpen(parser)>
enum Tokens: Int {
    case EOF = -1, <parser.tokens:{k | <k> = <parser.tokens.(k)>}; separator=", ", wrap, anchor>
}
<endif>

<accessLevelNotOpen(parser)>
<if(parser.rules)>
static let <parser.rules:{r | RULE_<r.name> = <r.index>}; separator=", ", wrap, anchor>
<endif>

<accessLevelNotOpen(parser)>
static let ruleNames: [String] = [
    <parser.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
]

<vocabulary(parser.literalNames, parser.symbolicNames,
    accessLevelNotOpen(parser))>

override <accessLevelOpenOK(parser)>
func getGrammarFileName() -> String { return "<parser.grammarFileName; format="java-escape">" }

override <accessLevelOpenOK(parser)>
func getRuleNames() -> [String] { return <parser.name>.ruleNames }

override <accessLevelOpenOK(parser)>
func getSerializedATN() -> String { return <parser.name>._serializedATN }

override <accessLevelOpenOK(parser)>
func getATN() -> ATN { return <parser.name>._ATN }

<namedActions.members>
<parser:(ctor)()>
<funcs; separator="\n">

<if(semprdfuncs)>
override <accessLevelOpenOK(parser)>

```

```

func sempred(_ _localctx: RuleContext?, _ ruleIndex: Int, _ predIndex: Int) throws -> Bool {
  switch (ruleIndex) {
    <parser.sempredFuncs.values: {f}
  case <f.ruleIndex>:
    return try <f.name>_sempred(_localctx?.castdown(<f.ctxType>.self), predIndex); separator="\n">
      default: return true
    }
    <!return true;!>
  }
  <sempredFuncs.values; separator="\n">
<endif>

<atn>

<accessLevelNotOpen(parser)>
static let _serializedATN = <parser.name>ATN().jsonString

<accessLevelNotOpen(parser)>
static let _ATN = ATNDeserializer().deserializeFromJson(_serializedATN)
}
>>

vocabulary(literalNames, symbolicNames, accessLevel) ::= <<
private static let _LITERAL_NAMES: [String?] = [
  <literalNames: {t | <t>}; null="nil", separator=", ", wrap, anchor>
]
private static let _SYMBOLIC_NAMES: [String?] = [
  <symbolicNames: {t | <t>}; null="nil", separator=", ", wrap, anchor>
]
]
<accessLevel>
static let VOCABULARY = Vocabulary(_LITERAL_NAMES, _SYMBOLIC_NAMES)
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
override <accessLevelOpenOK(parser)>
func action(_ _localctx: RuleContext?, _ ruleIndex: Int, _ actionIndex: Int) throws {
  switch (ruleIndex) {
    <recog.actionFuncs.values: {f}
  case <f.ruleIndex>:
    <f.name>_action((_localctx as <f.ctxType>?), actionIndex)
    }; separator="\n">
    default: break
  }
}
}
<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>

```

```

override <accessLevelOpenOK(parser)>
func sempred(_ _localctx: RuleContext?, _ ruleIndex: Int, _ predIndex: Int) throws -> Bool {
  switch (ruleIndex) {
    <recog.sempredFuncs.values:{f}
  case <f.ruleIndex>:
    return try <f.name>_sempred(_localctx?.castdown(<f.ctxType>.self), predIndex)); separator="\n">
  default: return true
  }
  <!return true;!>
}
<sempredFuncs.values; separator="\n">
<endif>
>>

```

```

parser_ctor(p) ::= <<

```

```

override <accessLevelOpenOK(parser)>
func getVocabulary() -> Vocabulary {
  return <p.name>.VOCABULARY
}

```

```

override <accessLevelNotOpen(parser)>
init(_ input:TokenStream) throws {
  RuntimeMetaData.checkVersion("4.9.2", RuntimeMetaData.VERSION)
  try super.init(input)
  _interp = ParserATNSimulator(self,<p.name>._ATN,<p.name>._decisionToDFA,
<parser.name>._sharedContextCache)
}

```

```

>>

```

```

/* This generates a private method since the actionIndex is generated, making an
* overriding implementation impossible to maintain.
*/

```

```

RuleActionFunction(r, actions) ::= <<
private func <r.name>_action(_ _localctx: <r.ctxType>?, _ actionIndex: Int) {
  switch (actionIndex) {
    <actions:{index|
  case <index>:
    <actions.(index)>
    }; separator="\n">
  default: break
  }
}
>>

```

```

/* This generates a private method since the predIndex is generated, making an
* overriding implementation impossible to maintain.

```

```

*/
RuleSempredFunction(r, actions) ::= <<
private func <r.name>_sempred(_localctx: <r.ctxType>!, _predIndex: Int) throws -> Bool {
switch (predIndex) {
<actions: {index|
case <index>:return <actions.(index)>; separator="\n">
default: return true
}
<!return true;!>
}
>>

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<
<ruleCtx>
<altLabelCtxs: {l | <altLabelCtxs.(l)>; separator="\n">
@discardableResult
<if(currentRule.modifiers)><currentRule.modifiers: {f | <f> }><else> <accessLevelOpenOK(parser)> func
<endif><currentRule.name><(if(first(args))>_ <endif><args; separator=", _">) throws -> <currentRule.ctxType> {
var _localctx: <currentRule.ctxType> = <currentRule.ctxType>(_ctx, getState()<currentRule.args: {a | ,
<a.name>}>>)
try enterRule(_localctx, <currentRule.startState>, <parser.name>.RULE_<currentRule.name>)
<namedActions.init>
<locals; separator="\n">
defer {
<finallyAction>
try! exitRule()
}
do {
<if(currentRule.hasLookaheadBlock)>
var _alt:Int
<endif>
<code>
<postamble; separator="\n">
<namedActions.after>
}
<if(exceptions)>
<exceptions; separator="\n">
<else>
catch ANTLRException.recognition(let re) {
_localctx.exception = re
_errHandler.reportError(self, re)
try _errHandler.recover(self, re)
}
<endif>

return _localctx
}

```

>>

```
LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,  
namedActions,finallyAction,postamble) ::=
```

<<

```
<ruleCtx>
```

```
<altLabelCtxs:{l | <altLabelCtxs.l>} ; separator="\n">
```

```
<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else> <accessLevelNotOpen(parser)> final <endif>  
func <currentRule.name>(<if(first(args))>_ <endif><args; separator=", _">) throws -> <currentRule.ctxType> {  
return try <currentRule.name>(0<currentRule.args:{a | , <a.name>}>)  
}
```

```
@discardableResult
```

```
private func <currentRule.name>(_ _p<args:{a | , <a>}>: Int) throws -> <currentRule.ctxType> {
```

```
let _parentctx: ParserRuleContext? = _ctx
```

```
let _parentState: Int = getState()
```

```
var _localctx: <currentRule.ctxType> = <currentRule.ctxType>(_ctx, _parentState<currentRule.args:{a | ,  
<a.name>}>)
```

```
var _prevctx: <currentRule.ctxType> = _localctx
```

```
let _startState: Int = <currentRule.startState>
```

```
try enterRecursionRule(_localctx, <currentRule.startState>, <parser.name>.RULE_<currentRule.name>, _p)
```

```
<namedActions.init>
```

```
<locals; separator="\n">
```

```
defer {
```

```
    <finallyAction>
```

```
    try! unrollRecursionContexts(_parentctx)
```

```
}
```

```
do {
```

```
<if(currentRule.hasLookaheadBlock)>
```

```
    var _alt: Int
```

```
<endif>
```

```
<code>
```

```
<postamble; separator="\n">
```

```
<namedActions.after>
```

```
}
```

```
catch ANTLRException.recognition(let re) {
```

```
    _localctx.exception = re
```

```
    _errHandler.reportError(self, re)
```

```
    try _errHandler.recover(self, re)
```

```
}
```

```
return _localctx;
```

```
}
```

>>

```
CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
```

```
<if(currentOuterMostAltCodeBlock.altLabel)>_localctx = <currentOuterMostAltCodeBlock.altLabel;
```

```

format="cap">Context(_localctx);<endif>
try enterOuterAlt(_localctx, <currentOuterMostAltCodeBlock.alt.altNum>)
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

```

```

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
<!/{!>
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
<!/{!>
>>

```

```

LL1AltBlock(choice, preamble, alts, error) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = try _input.LT(1)<endif>
<preamble; separator="\n">
switch (<parser.name>.Tokens(rawValue: try _input.LA(1))!) {
<choice.altLook,alts:{look,alt | <cases(ttypes=look)>
<alt>
break }; separator="\n">
default:
<error>
}
>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
switch (<parser.name>.Tokens(rawValue: try _input.LA(1))!) {
<choice.altLook,alts:{look,alt | <cases(ttypes=look)>
<alt>
break }; separator="\n">
default:
break
}
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
<preamble; separator="\n">
if (<expr>) {
<alts; separator="\n">
}
<!else if ( !(<followExpr> ) <error>!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
<preamble; separator="\n">
while (<loopExpr>) {
  <alts; separator="\n">
  setState(<choice.loopBackStateNumber>)
  try _errHandler.sync(self)
  <iteration>
}
>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
setState(<choice.blockStartStateNumber>) <! alt block decision !>
try _errHandler.sync(self)
<preamble; separator="\n">
repeat {
  <alts; separator="\n">
  setState(<choice.stateNumber>); <! loopback/exit decision !>
  try _errHandler.sync(self)
  <iteration>
} while (<loopExpr>)
>>

```

// LL(\*) stuff

```

AltBlock(choice, preamble, alts, error) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = try _input.LT(1)<endif>
<preamble; separator="\n">
switch(try getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx)) {
  <alts:{alt |
case <i>:
  <alt>
break}; separator="\n">
default: break
}
>>

```

```

OptionalBlock(choice, alts, error) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
switch (try getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx)) {
  <alts:{alt |
case <i><if(!choice.ast.greedy)>+1<endif>:
  <alt>

```

```

break }; separator="\n">
default: break
}
>>

```

```

StarBlock(choice, alts, sync, iteration) ::= <<
setState(<choice.stateNumber>)
try _errHandler.sync(self)
_alt = try getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx)
while (_alt != <choice.exitAlt> && _alt != ATN.INVALID_ALT_NUMBER) {
if ( _alt==1<if(!choice.ast.greedy)>+1<endif> ) {
<iteration>
<alts> <! should only be one !>
}
setState(<choice.loopBackStateNumber>)
try _errHandler.sync(self)
_alt = try getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx)
}
>>

```

```

PlusBlock(choice, alts, error) ::= <<
setState(<choice.blockStartStateNumber>); <! alt block decision !>
try _errHandler.sync(self)
_alt = 1<if(!choice.ast.greedy)>+1<endif>;
repeat {
switch (_alt) {
<alts:{alt|
case <i><if(!choice.ast.greedy)>+1<endif>:
<alt>
break }; separator="\n">
default:
<error>
}
setState(<choice.loopBackStateNumber>); <! loopback/exit decision !>
try _errHandler.sync(self)
_alt = try getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx)
} while (_alt != <choice.exitAlt> && _alt != ATN.INVALID_ALT_NUMBER)
>>

```

```

Sync(s) ::= "sync(<s.expecting.name>);"

```

```

ThrowNoViableAlt(t) ::= "throw ANTLRException.recognition(e: NoViableAltException(self))"

```

```

TestSetInline(s) ::= <<
<!<s.bitsets:{bits | <if(rest(rest(bits.ttypes))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">!>
//closure
{ () -> Bool in

```

```

    <if(rest(s.bitsets))>var<else>let<endif> testSet: Bool = <first(s.bitsets):{bits |
<if(rest(rest(bits.ttypes))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s, bits)><endif>>
    <rest(s.bitsets):{bits | testSet = testSet || <if(rest(rest(bits.ttypes))><bitsetBitfieldComparison(s,
bits)><else><bitsetInlineComparison(s, bits)><endif>>; separator="\n">
    return testSet
}()
>>

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <<
<!(<testShiftInRange({<offsetShift(s.varName, bits.shift)>})> && ((1 \<< <offsetShift(s.varName, bits.shift)>) &
(<bits.ttypes:{ttype | (1 \<< <offsetShift(ttype, bits.shift)>)}; separator=" | ">)) != 0)!>
{ () -> Bool in
    <! let test: Bool = (<testShiftInRange({<offsetShift(s.varName, bits.shift)>})>)!>
    <!var temp: Int64 = Int64(<offsetShift(s.varName, bits.shift)>)!>
    <!temp = (temp \< 0) ? (64 + (temp % 64)) : (temp % 64)!>
    <!let test1: Int64 = (Int64(1) \<< temp)!>
    <!var test2: Int64 = (<first(bits.ttypes):{ttype | Utils.bitLeftShift(<offsetShift(parserName(ttype), bits.shift)>)}>)!>
    <!<rest(bits.ttypes):{ttype | test2 = test2 | Utils.bitLeftShift(<offsetShift(parserName(ttype), bits.shift)>)}>;
separator="\n">!>
    let testArray: [Int] = [<s.varName>, <bits.ttypes:{ttype |<parserName(ttype)>}; separator=",">]
    <!var test2: Int64 = Utils.testBitLeftShiftArray(testArray)!>
    return Utils.testBitLeftShiftArray(testArray, <bits.shift>)
}()
>>

isZero ::= [
"0": true,
default: false
]
parserName(ttype) ::= <%
<parser.name>.Tokens.<ttype>.rawValue
%>
offsetShift(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ttype | <s.varName> == <parser.name>.Tokens.<ttype>.rawValue}; separator=" || ">
%>

cases(ttypes) ::= <<

```

```

<trunc(ttypes): {t | case .<t>:fallthrough} ; separator="\n">
<last(ttypes): {t | case .<t>:} ; separator="\n">
>>

```

```

InvokeRule(r, argExprsChunks) ::= <<
setState(<r.stateNumber>)
<if(r.labels)>
try {
  let assignmentValue = try
<r.name>(<if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)>,<endif><endif><argExprsChunks>)
  <r.labels:{1 | <labelref(l)> = assignmentValue} ; separator="\n">
  }()
<else>try
<r.name>(<if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)>,<endif><endif><argExprsChunks>)<endif>
>>

```

```

MatchToken(m) ::= <<
setState(<m.stateNumber>)
<if(m.labels)>
try {
  let assignmentValue = try match(<parser.name>.Tokens.<m.name>.rawValue)
  <m.labels:{1 | <labelref(l)> = assignmentValue} ; separator="\n">
  }()
<else>try match(<parser.name>.Tokens.<m.name>.rawValue)<endif>
>>

```

```

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

```

```

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

```

```

CommonSetStuff(m, expr, capture, invert) ::= <<
setState(<m.stateNumber>)
<if(m.labels)><m.labels:{1 | <labelref(l)> = }>try _input.LT(1)<endif>
<capture>
if (<if(invert)><m.varName> \<= 0 || <else>!<endif>(<expr>)) {
  <if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>try _errHandler.recoverInline(self)<if(m.labels)> as
  Token<endif>
}
else {
  _errHandler.reportMatch(self)
  try consume()
}
>>

```

```

Wildcard(w) ::= <<
setState(<w.stateNumber>)
<if(w.labels)><w.labels:{1 | <labelref(l)> = }><endif>try matchWildcard();
>>

```

```

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
setState(<p.stateNumber>)
if (!(<chunks>)) {
    throw ANTLRException.recognition(e:FailedPredicateException(self, <p.predicate><if(failChunks)>,
<failChunks><elseif(p.msg)>, <p.msg><endif>))
}
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
    <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "skip()"
LexerMoreCommand() ::= "more()"
LexerPopModeCommand() ::= "popMode()"

LexerTypeCommand(arg)    ::= "_type = <arg>"
LexerChannelCommand(arg) ::= "_channel = <arg>"
LexerModeCommand(arg)    ::= "_mode = <arg>"
LexerPushModeCommand(arg) ::= "pushMode(<arg>)"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "_localctx.<a.name>"
LocalRef(a) ::= "_localctx.<a.name>"
RetValRef(a) ::= "_localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>"

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getText()! : \"\""

```

```

TokenPropertyRef_type(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getType() : 0)"
TokenPropertyRef_line(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getLine() : 0)"
TokenPropertyRef_pos(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getCharPositionInLine() : 0)"
TokenPropertyRef_channel(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getChannel() : 0)"
TokenPropertyRef_index(t) ::= "<ctx(t)>.<t.label> != nil ? <ctx(t)>.<t.label>!.getTokenIndex() : 0)"
TokenPropertyRef_int(t) ::= "<ctx(t)>.<t.label> != nil ? Int(<ctx(t)>.<t.label>!.getText()) : 0)"

RulePropertyRef_start(r) ::= "<ctx(r)>.<r.label> != nil ? (<ctx(r)>.<r.label>!.start?.description ?? \"\"): \"\)"
RulePropertyRef_stop(r) ::= "<ctx(r)>.<r.label> != nil ? (<ctx(r)>.<r.label>!.stop?.description ?? \"\"): \"\)"
RulePropertyRef_text(r) ::= "<ctx(r)>.<r.label> != nil ? try
_input.getText(<ctx(r)>.<r.label>!.start,<ctx(r)>.<r.label>!.stop) : \"\)"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "self"

ThisRulePropertyRef_start(r) ::= "_localctx.start"
ThisRulePropertyRef_stop(r) ::= "_localctx.stop"
ThisRulePropertyRef_text(r) ::= "(try _input.getText(_localctx.start, try _input.LT(-1)))"
ThisRulePropertyRef_ctx(r) ::= "_localctx"
ThisRulePropertyRef_parser(r) ::= "self"

NonLocalAttrRef(s) ::= "(<s.ruleName; format=\\\"cap\\\">Context)getInvokingContext(<s.ruleIndex>).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::=
"(<s.ruleName; format=\\\"cap\\\">Context)getInvokingContext(<s.ruleIndex>).<s.name> = <rhsChunks>"

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.append(<labelref(a.label)>)"

TokenDecl(t) ::= "<t.name>: <SwiftTypeMap.(TokenLabelType())>!"
TokenTypeDecl(t) ::= "var <t.name>: Int = 0"
TokenListDecl(t) ::= "<t.name>: [Token] = [Token]()"
RuleContextDecl(r) ::= "<r.name>: <r.ctxName>!"
RuleContextListDecl(rdecl) ::= "<rdecl.name>: [<rdecl.ctxName>] = [<rdecl.ctxName>]()"

ContextTokenGetterDecl(t) ::= <<
<accessLevelOpenOK(parser)>
func <t.name>() -> TerminalNode? {
return getToken(<parser.name>.Tokens.<t.name>.rawValue, 0)
}
>>

ContextTokenListGetterDecl(t) ::= <<
<accessLevelOpenOK(parser)>
func <t.name>() -> [TerminalNode] {
return getTokens(<parser.name>.Tokens.<t.name>.rawValue)
}
>>

ContextTokenListIndexedGetterDecl(t) ::= <<
<accessLevelOpenOK(parser)>
func <t.name>(_ i:Int) -> TerminalNode? {
return getToken(<parser.name>.Tokens.<t.name>.rawValue, i)

```

```

}
>>
ContextRuleGetterDecl(r) ::= <<
  <accessLevelOpenOK(parser)>
  func <r.name>() -> <r.ctxName>? {
    return getRuleContext(<r.ctxName>.self, 0)
  }
>>

ContextRuleListGetterDecl(r) ::= <<
  <accessLevelOpenOK(parser)>
  func <r.name>() -> [<r.ctxName>] {
    return getRuleContexts(<r.ctxName>.self)
  }
>>

ContextRuleListIndexedGetterDecl(r) ::= <<
  <accessLevelOpenOK(parser)>
  func <r.name>(_ i: Int) -> <r.ctxName>? {
    return getRuleContext(<r.ctxName>.self, i)
  }
>>

LexerRuleContext() ::= "RuleContext"

/** The rule context name is the rule followed by a suffix; e.g.,
 * r becomes rContext.
 */
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenName>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "<d.varName> = try _input.LT(1)"
CaptureNextTokenType(d) ::= "<d.varName> = try _input.LA(1)"

StructDecl(struct,ctorAttrs,attrs,getters,dispatchMethods,interfaces,extensionMembers,
  superClass={ParserRuleContext}) ::= <<

  <accessLevelNotOpen(parser)> class <struct.name>:
  <if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif><if(interfaces)>, <interfaces>
  separator=", "<endif> {
  <attrs:{a | <accessLevelOpenOK(parser)> var <a>}; separator="\n">
  <getters:{g | <g>}; separator="\n">
  <! <if(ctorAttrs)> <accessLevelNotOpen(parser)> init(_ parent: ParserRuleContext,_ invokingState: Int) {
  super.init(parent, invokingState) }<endif> !>
  <if(ctorAttrs)>
  <accessLevelNotOpen(parser)> convenience init(_ parent: ParserRuleContext?, _ invokingState: Int<ctorAttrs:{a | ,

```

```

_ <a>}) {
  self.init(parent, invokingState)
  <struct.ctorAttrs:{ a | self.<a.name> = <a.name>; separator="\n">
}
<endif>

override <accessLevelOpenOK(parser)>
func getRuleIndex() -> Int {
  return <parser.name>.RULE_<struct.derivedFromName>
}
<if(struct.provideCopyFrom && struct.attrs)> <! don't need copy unless we have subclasses !>
<accessLevelOpenOK(parser)>
override func copyFrom(_ ctx_: ParserRuleContext) {
  super.copyFrom(ctx_)
  let ctx = ctx_ as! <struct.name>
  <struct.attrs:{ a | self.<a.name> = ctx.<a.name>; separator="\n">
}
<endif>
<dispatchMethods; separator="\n">
<extensionMembers; separator="\n">
}
>>

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
<accessLevelNotOpen(parser)> class <struct.name>: <currentRule.name; format="cap">Context {
  <attrs:{ a | <accessLevelNotOpen(parser)> var <a>; separator="\n">
  <getters:{ g | <g>; separator="\n">

  <accessLevelNotOpen(parser)>
  init(_ ctx: <currentRule.name; format="cap">Context) {
    super.init()
    copyFrom(ctx)
  }
  <dispatchMethods; separator="\n">
}
>>

ListenerDispatchMethod(method) ::= <<
override <accessLevelOpenOK(parser)>
func <if(method.isEnter)>enter<else>exit<endif>Rule(_ listener: ParseTreeListener) {
  if let listener = listener as? <parser.grammarName>Listener {
    listener.<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">(self)
  }
}
>>

VisitorDispatchMethod(method) ::= <<
override <accessLevelOpenOK(parser)>

```

```

func accept<T>(<_ visitor: ParseTreeVisitor<T>) -> T? {
  if let visitor = visitor as? <parser.grammarName>Visitor {
    return visitor.visit<struct.derivedFromName; format="cap">(self)
  }
  else if let visitor = visitor as? <parser.grammarName>BaseVisitor {
    return visitor.visit<struct.derivedFromName; format="cap">(self)
  }
  else {
    return visitor.visitChildren(self)
  }
}
>>

```

```

AttributeDecl(d) ::= "<d.name>: <SwiftTypeMap.(d.type)><if(d.initValue)> = <d.initValue><else>!<endif>"

```

```

/** If we don't know location of label def x, use this template (<_localctx as! <x.ctx.name> */
labelref(x) ::= "<if(!x.isLocal)>_localctx.castdown(<x.ctx.name>.self).<endif><x.name>"

```

```

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "_localctx.castdown(<actionChunk.ctx.name>.self)"

```

```

// used for left-recursive rules

```

```

recRuleAltPredicate(ruleName,opPrec) ::= "precpred(<_ctx, <opPrec>)"

```

```

recRuleSetReturnAction(src,name) ::= "$<name>=<src>.<name>"

```

```

recRuleSetStopToken() ::= "_ctx!.stop = try _input.LT(-1)"

```

```

recRuleAltStartAction(ruleName, ctxName, label, isListLabel) ::= <<

```

```

  _localctx = <ctxName>Context(<_parentctx, <_parentState>);

```

```

  <if(label)>

```

```

  <if(isListLabel)>

```

```

    _localctx.<label>.append(<_prevctx>)

```

```

  <else>

```

```

    _localctx.<label> = <_prevctx>

```

```

  <endif>

```

```

<endif>

```

```

<if(label)>_localctx.<label> = <_prevctx>;<endif>

```

```

try pushNewRecursionContext(<_localctx, <_startState, <parser.name>.RULE_<ruleName>)

```

```

>>

```

```

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<

```

```

  _localctx = <currentAltLabel; format="cap">Context( <ruleName; format="cap">Context(<_parentctx,
  _parentState))

```

```

  <if(label)>

```

```

  <if(isListLabel)>

```

```

    (<_localctx as! <currentAltLabel; format="cap">Context).<label>.append(<_prevctx>)

```

```

  <else>

```

```

    (<_localctx as! <currentAltLabel; format="cap">Context).<label> = <_prevctx>

```

```

  <endif>

```

```

<endif>
try pushNewRecursionContext(_localctx, _startState, <parser.name>.RULE_<ruleName>)
>>

recRuleReplaceContext(ctxName) ::= <<
  _localctx = <ctxName>Context(_localctx)
  _ctx = _localctx
  _prevctx = _localctx
>>

recRuleSetPrevCtx() ::= <<
if _parseListeners != nil {
  try triggerExitRuleEvent()
}
_prevctx = _localctx
>>

LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
<if(lexerFile.genPackage)>
<!package <lexerFile.genPackage>;!>
<endif>
<namedActions.header>
import Antlr4

<lexer>
>>
Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
<accessLevelOpenOK(lexer)> class <lexer.name>: <superClass; null="Lexer"> {

internal static var _decisionToDFA: [DFA] = {
  var decisionToDFA = [DFA]()
  let length = <lexer.name>._ATN.getNumberOfDecisions()
  for i in 0..<length {
    <! decisionToDFA[i] = DFA(<lexer.name>._ATN.getDecisionState(i), i);!>
    decisionToDFA.append(DFA(<lexer.name>._ATN.getDecisionState(i), i))
  }
  return decisionToDFA
}()

internal static let _sharedContextCache = PredictionContextCache()

<accessLevelNotOpen(lexer)>
<if(lexer.tokens)>
static let <lexer.tokens>:{k | <k>=<lexer.tokens.(k)>}; separator=", ", wrap, anchor>
<endif>

```

```

<if(lexer.channels)>
<accessLevelNotOpen(lexer)>
static let <lexer.channels:{k | <k>=<lexer.channels.(k)>}; separator=", ", wrap, anchor>
<endif>
<if(rest(lexer.modes))>
<accessLevelNotOpen(lexer)>
static let <rest(lexer.modes){m | <m>=<i>}; separator=", ", wrap, anchor>
<endif>
<accessLevelNotOpen(lexer)>
static let channelNames: [String] = [
  "DEFAULT_TOKEN_CHANNEL", "HIDDEN"<if (lexer.channels)>, <lexer.channels:{c | "<c>"}; separator=", ",
wrap, anchor><endif>
]

<accessLevelNotOpen(lexer)>
static let modeNames: [String] = [
  <lexer.modes:{m | "<m>"}; separator=", ", wrap, anchor>
]

<accessLevelNotOpen(lexer)>
static let ruleNames: [String] = [
  <lexer.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
]

<vocabulary(lexer.literalNames, lexer.symbolicNames,
  accessLevelNotOpen(lexer))>

<namedActions.members>

override <accessLevelOpenOK(lexer)>
func getVocabulary() -> Vocabulary {
  return <lexer.name>.VOCABULARY
}

<accessLevelNotOpen(lexer)>
required init(_ input: CharStream) {
  RuntimeMetaData.checkVersion("<lexerFile.ANTLRVersion>", RuntimeMetaData.VERSION)
  super.init(input)
  _interp = LexerATNSimulator(self, <lexer.name>._ATN, <lexer.name>._decisionToDFA,
<lexer.name>._sharedContextCache)
}

override <accessLevelOpenOK(lexer)>
func getGrammarFileName() -> String { return "<lexer.grammarFileName>" }

override <accessLevelOpenOK(lexer)>
func getRuleNames() -> [String] { return <lexer.name>.ruleNames }

```

```

override <accessLevelOpenOK(lexer)>
func getSerializedATN() -> String { return <lexer.name>._serializedATN }

override <accessLevelOpenOK(lexer)>
func getChannelNames() -> [String] { return <lexer.name>.channelNames }

override <accessLevelOpenOK(lexer)>
func getModeNames() -> [String] { return <lexer.name>.modeNames }

override <accessLevelOpenOK(lexer)>
func getATN() -> ATN { return <lexer.name>._ATN }

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>
<atn>

<accessLevelNotOpen(lexer)>
static let _serializedATN: String = <lexer.name>ATN().jsonString

<accessLevelNotOpen(lexer)>
static let _ATN: ATN = ATNDeserializer().deserializeFromJson(_serializedATN)
}
>>

/** Don't need to define anything. The tool generates a XParserATN.swift file (and same for lexer)
 * which is referenced from static field _serializedATN. This json string is passed to
 * deserializeFromJson(). Note this is not the "serialization as array of ints" that other targets
 * do. It is more or less the output of ATNPrinter which gets read back in.
 */
SerializedATN(model) ::= <<
>>

/** Using a type to init value map, try to init a type; if not in table
 * must be an object, default value is "null".
 */
initValue(typeName) ::= <<
<SwiftTypeInitMap.(typeName)>
>>

codeFileExtension() ::= ".swift"

Found in path(s):
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/Swift/Swift.stg
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\*/

/\*

This file contains the actual layout of the messages emitted by ANTLR.

The text itself is coming out of the languages/\*stg files, according to the chosen locale.

This file contains the default format ANTLR uses.

\*/

```
location(file, line, column) ::= "<file>(<line>,<column>)"
```

```
message(id, text) ::= "error <id> : <text>"
```

```
report(location, message, type) ::= "<location> : <type> <message.id> : <message.text>"
```

```
wantsSingleLineMessage() ::= "true"
```

Found in path(s):

```
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/messages/formats/vs2005.stg
```

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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/ANTLRParser.java

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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/tool/templates/codegen/Cpp/Files.stg

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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/gui/GraphicsSupport.java

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\*/

```
phpTypeInitMap ::= [
```

```
  "int": "0",
```

```
  "long": "0",
```

```
  "float": "0.0",
```

```
  "double": "0.0",
```

```
  "boolean": "false",
```

```
  default: "null"
```

```
]
```

```
// args must be <object-model-object>, <fields-resulting-in-STs>
```

```
ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
```

```
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
```

```
<parser>
```

```
>>
```

```

ListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage>;
<endif>
<header>
use Antlr\Antlr4\Runtime\Tree\ParseTreeListener;

/**
 * This interface defines a complete listener for a parse tree produced by
 * { @see <file.parserName> }.
 */
interface <file.grammarName>Listener extends ParseTreeListener {
<file.listenerNames: {Iname |
/**
<if(file.listenerLabelRuleNames.(Iname))>
 * Enter a parse tree produced by the `<Iname>`
 * labeled alternative in { @see <file.parserName>::<file.listenerLabelRuleNames.(Iname)>() }.
<else>
 * Enter a parse tree produced by { @see <file.parserName>::<Iname>() }.
<endif>
 * @param $context The parse tree.
 */
public function enter<Iname; format="cap">(Context\<Iname; format="cap">Context $context) : void;
/**
<if(file.listenerLabelRuleNames.(Iname))>
 * Exit a parse tree produced by the `<Iname>` labeled alternative
 * in { @see <file.parserName>::<file.listenerLabelRuleNames.(Iname)>() }.
<else>
 * Exit a parse tree produced by { @see <file.parserName>::<Iname>() }.
<endif>
 * @param $context The parse tree.
 */
public function exit<Iname; format="cap">(Context\<Iname; format="cap">Context $context) : void;
separator="\n">
}
>>

```

```

BaseListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage>;
<endif>
<header>

```

```

use Antlr\Antlr4\Runtime\ParserRuleContext;
use Antlr\Antlr4\Runtime\Tree\ErrorNode;

```

```

use Antlr\Antlr4\Runtime\Tree\TerminalNode;

/**
 * This class provides an empty implementation of { @see <file.grammarName>Listener},
 * which can be extended to create a listener which only needs to handle a subset
 * of the available methods.
 */
class <file.grammarName>BaseListener implements <file.grammarName>Listener
{
    <file.listenerNames> {lname |
/**
 * { @inheritdoc\}
 *
 * The default implementation does nothing.
 */
public function enter<lname; format="cap">(Context\<lname; format="cap">Context $context) : void {}

/**
 * { @inheritdoc\}
 *
 * The default implementation does nothing.
 */
public function exit<lname; format="cap">(Context\<lname; format="cap">Context $context) : void {}};
separator="\n">

/**
 * { @inheritdoc\}
 *
 * The default implementation does nothing.
 */
public function enterEveryRule(ParserRuleContext $context) : void {}

/**
 * { @inheritdoc\}
 *
 * The default implementation does nothing.
 */
public function exitEveryRule(ParserRuleContext $context) : void {}

/**
 * { @inheritdoc\}
 *
 * The default implementation does nothing.
 */
public function visitTerminal(TerminalNode $node) : void {}

/**
 * { @inheritdoc\}

```

```

*
* The default implementation does nothing.
*/
public function visitErrorNode(ErrorNode $node) : void { }
}
>>

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage>;
<endif>

<header>
use Antlr\Antlr4\Runtime\Tree\ParseTreeVisitor;

/**
 * This interface defines a complete generic visitor for a parse tree produced by { @see <file.parserName> }.
 */
interface <file.grammarName>Visitor extends ParseTreeVisitor
{
    <file.visitorNames:{ Iname |
/**
<if(file.visitorLabelRuleNames.(Iname))>
 * Visit a parse tree produced by the `<Iname>` labeled alternative
 * in { @see <file.parserName>::<file.visitorLabelRuleNames.(Iname)>() }.
<else>
 * Visit a parse tree produced by { @see <file.parserName>::<Iname>() }.
<endif>
 *
 * @param Context\<Iname; format="cap">Context $context The parse tree.
 *
 * @return mixed The visitor result.
 */
public function visit<Iname; format="cap">(Context\<Iname; format="cap">Context $context);;
separator="\n\n"
}
>>

BaseVisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage>;
<endif>
<header>
use Antlr\Antlr4\Runtime\Tree\AbstractParseTreeVisitor;

/**

```

```

* This class provides an empty implementation of { @see <file.grammarName>Visitor},
* which can be extended to create a visitor which only needs to handle a subset
* of the available methods.
*/
class <file.grammarName>BaseVisitor extends AbstractParseTreeVisitor implements <file.grammarName>Visitor
{
    <file.visitorNames:{ lname |
/**
* { @inheritdoc\}
*
* The default implementation returns the result of calling
* { @see self::visitChildren()\} on `context`.
*/
public function visit<lname; format="cap">(Context\|<lname; format="cap">Context $context)
{
    return $this->visitChildren($context);
\}}; separator="\n\n">
}
>>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
\<?php

/*
* Generated from <grammarFileName> by ANTLR <ANTLRVersion>
*/

>>
Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
namespace<if(file.genPackage)> <file.genPackage><endif> {
<if(namedActions.header)><namedActions.header><endif>
use Antlr\Antlr4\Runtime\Atn\ATN;
use Antlr\Antlr4\Runtime\Atn\ATNDeserializer;
use Antlr\Antlr4\Runtime\Atn\ParserATNSimulator;
use Antlr\Antlr4\Runtime\Dfa\DFA;
use Antlr\Antlr4\Runtime\Error\Exceptions\FailedPredicateException;
use Antlr\Antlr4\Runtime\Error\Exceptions\NoViableAltException;
use Antlr\Antlr4\Runtime\PredictionContexts\PredictionContextCache;
use Antlr\Antlr4\Runtime\Error\Exceptions\RecognitionException;
use Antlr\Antlr4\Runtime\RuleContext;
use Antlr\Antlr4\Runtime\Token;
use Antlr\Antlr4\Runtime\TokenStream;
use Antlr\Antlr4\Runtime\Vocabulary;
use Antlr\Antlr4\Runtime\VocabularyImpl;

```

```

use Antlr4\Runtime\RuntimeMetaData;
use Antlr4\Runtime\Parser;
<if(namedActions.definitions)><namedActions.definitions><endif>

final class <parser.name> extends <superClass; null="Parser">
{
<if(parser.tokens)>
public const <parser.tokens:{k | <k> = <parser.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>

<if(parser.rules)>
public const <parser.rules:{r | RULE_<r.name> = <r.index>}; separator=", ", wrap, anchor>;
<endif>

/**
 * @var array<string>
 */
public const RULE_NAMES = [
<parser.ruleNames:{r | '<r>'}; separator=", ", wrap, anchor>
];

<vocabulary(parser.literalNames, parser.symbolicNames)>

<atn>
protected static $atn;
protected static $decisionToDFA;
protected static $sharedContextCache;
<if(namedActions.members)>

<namedActions.members>
<endif>

<parser:(ctor)>

private static function initialize() : void
{
if (self::$atn !== null) {
return;
}

RuntimeMetaData::checkVersion('<file.ANTLRVersion>', RuntimeMetaData::VERSION);

$atn = (new ATNDeserializer()->deserialize(self::SERIALIZED_ATN);

$decisionToDFA = [];
for ($i = 0, $count = $atn->getNumberOfDecisions(); $i < $count; $i++) {
$decisionToDFA[] = new DFA($atn->getDecisionState($i), $i);
}
}

```

```

}

self::$atn = $atn;
self::$decisionToDFA = $decisionToDFA;
self::$sharedContextCache = new PredictionContextCache();
}

public function getGrammarFileName() : string
{
    return "<parser.grammarFileName>";
}

public function getRuleNames() : array
{
    return self::RULE_NAMES;
}

public function getSerializedATN() : string
{
    return self::SERIALIZED_ATN;
}

public function getATN() : ATN
{
    return self::$atn;
}

public function getVocabulary() : Vocabulary
{
    static $vocabulary;

    return $vocabulary = $vocabulary ?? new VocabularyImpl(self::LITERAL_NAMES, self::SYMBOLIC_NAMES);
}
<if(funcs)>

<funcs; separator="\n\n">
<endif>
<if(sempredFuncs)>

public function sempred(?RuleContext $localContext, int $ruleIndex, int $predicateIndex) : bool
{
    switch ($ruleIndex) {
    <parser.sempredFuncs.values:{f}
    case <f.ruleIndex>:
        return $this->sempred<f.name; format="cap">($localContext, $predicateIndex);}; separator="\n\n">

    default:
        return true;
}

```

```

    }
}

<sempredFuncs.values; separator="\n\n">
<endif>
}
}

namespace <if(file.genPackage)><file.genPackage>\<endif>Context {
    use Antlr\Antlr4\Runtime\ParserRuleContext;
    use Antlr\Antlr4\Runtime\Token;
    use Antlr\Antlr4\Runtime\Tree\ParseTreeVisitor;
    use Antlr\Antlr4\Runtime\Tree\TerminalNode;
    use Antlr\Antlr4\Runtime\Tree\ParseTreeListener;
    use <if(file.genPackage)><file.genPackage>\<endif><parser.name>;
    <if (file.genVisitor)>use <if(file.genPackage)><file.genPackage>\<endif><file.grammarName>Visitor;<endif>
    <if (file.genListener)>use <if(file.genPackage)><file.genPackage>\<endif><file.grammarName>Listener;<endif>
    <namedActions.contexts>

    <funcs :{ func | <func.ruleCtx><if(func.altLabelCtxs)>

    <func.altLabelCtxs:{l | <func.altLabelCtxs(l)>}; separator="\n\n"><endif> }; separator="\n\n">
    }
>>

vocabulary(literalNames, symbolicNames) ::= <<
/**
 * @var array<string|null>
 */
private const LITERAL_NAMES = [
    <literalNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
];

/**
 * @var array<string>
 */
private const SYMBOLIC_NAMES = [
    <symbolicNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
];
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>

public function action(?RuleContext $localContext, int $ruleIndex, int $actionIndex) : void
{
    switch ($ruleIndex) {
        <recog.actionFuncs.values:{f}

```

```

case <f.ruleIndex>:
  $this->action<f.name; format="cap">($localContext, $actionIndex);
  break;}; separator="\n\n">
}
}

<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>

public function sempred(?RuleContext $localContext, int $ruleIndex, int $predicateIndex) : bool
{
  switch ($ruleIndex) {
    <recog.sempredFuncs.values:{f|
      case <f.ruleIndex>:
        return $this->sempred<f.name; format="cap">($localContext, $predicateIndex);}; separator="\n\n">
    }

    return true;
  }
  <sempredFuncs.values; separator="\n\n">
  <endif>
  >>

parser_ctor(p) ::= <<
public function __construct(TokenStream $input)
{
  parent::__construct($input);

  self::initialize();

  $this->interp = new ParserATNSimulator($this, self::$atn, self::$decisionToDFA, self::$sharedContextCache);
}
>>

/**
 * This generates a private method since the actionIndex is generated, making
 * an overriding implementation impossible to maintain.
 */
RuleActionFunction(r, actions) ::= <<
private function action<r.name; format="cap">(?

```

```

}
}
>>

/**
 * This generates a private method since the predicateIndex is generated, making
 * an overriding implementation impossible to maintain.
 */
RuleSempredFunction(r, actions) ::= <<
private function sempred<r.name; format="cap">(Context\<r.ctxType> $localContext, int $predicateIndex) : bool
{
switch ($predicateIndex) {
<actions: {index|
case <index>:
return <actions.(index)>;}; separator="\n\n">
}

return true;
}
>>

RuleFunction(currentRule, args, code, locals, ruleCtx, altLabelCtxs, namedActions, finallyAction, exceptions, postamble)
::= <<
/**
 * @throws RecognitionException
 */
<if(currentRule.modifiers)><currentRule.modifiers: {f | <f> }><endif>public function <currentRule.name>(args;
separator=", ">) : Context\<currentRule.ctxType>
{
$localContext = new Context\<currentRule.ctxType>($this->ctx, $this->getState())<currentRule.args: {a | ,
$a.name}>>);

$this->enterRule($localContext, <currentRule.startState>, self::RULE_<currentRule.name>);
<namedActions.init>
<locals; separator="\n\n">

try {
<code>
<postamble; separator="\n\n">
<namedActions.after>
}<if(exceptions)><exceptions; separator="\n\n"><else> catch (RecognitionException $exception) {
$localContext->exception = $exception;
$this->errorHandler->reportError($this, $exception);
$this->errorHandler->recover($this, $exception);
}<endif> finally {
<finallyAction>
$this->exitRule();
}
}

```

```

    return $localContext;
}
>>

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble) ::= <<
/**
 * @throws RecognitionException
 */
<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><endif>public function <currentRule.name>(<args;
separator=", ">) : Context\<currentRule.ctxType>
{
    return $this->recursive<currentRule.name; format="cap">(0<currentRule.args:{a | , <a.name>}>);
}

/**
 * @throws RecognitionException
 */
private function recursive<currentRule.name; format="cap">(int $precedence<args:{a | , <a>}>) :
Context\<currentRule.ctxType>
{
    $parentContext = $this->ctx;
    $parentState = $this->getState();
    $localContext = new Context\<currentRule.ctxType>($this->ctx, $parentState<currentRule.args:{a | ,
<a.name>}>);
    $previousContext = $localContext;
    $startState = <currentRule.startState>;
    $this->enterRecursionRule($localContext, <currentRule.startState>, self::RULE_<currentRule.name>,
$precedence);
    <namedActions.init>
    <locals; separator="\n">

    try {
        <code>
        <postamble; separator="\n">
        <namedActions.after>
    } catch (RecognitionException $exception) {
        $localContext->exception = $exception;
        $this->errorHandler->reportError($this, $exception);
        $this->errorHandler->recover($this, $exception);
    } finally {
        <finallyAction>
        $this->unrollRecursionContexts($parentContext);
    }

    return $localContext;
}

```

>>

```
CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>$localContext = new
Context\|<currentOuterMostAltCodeBlock.altLabel; format="cap">Context($localContext);<endif>
$this->enterOuterAlt($localContext, <currentOuterMostAltCodeBlock.alt.altNum>);
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>
```

```
CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
>>
```

```
LL1AltBlock(choice, preamble, alts, error) ::= <<
$this->setState(<choice.stateNumber>);
$this->errorHandler->sync($this);
<if(choice.label)><labelref(choice.label)> = $this->input->LT(1);<endif>
<preamble; separator="\n">
```

```
switch ($this->input->LA(1)) {
  <choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  break;}; separator="\n\n">
```

```
default:
  <error>
}
>>
```

```
LL1OptionalBlock(choice, alts, error) ::= <<
$this->setState(<choice.stateNumber>);
$this->errorHandler->sync($this);

switch ($this->input->LA(1)) {
  <choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  break;}; separator="\n\n">
```

```
default:
  break;
}
>>
```

```
LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
$this->setState(<choice.stateNumber>);
$this->errorHandler->sync($this);
```

```
<preamble; separator="\n">
```

```
if (<expr>) {  
  <alts; separator="\n">  
}  
>>
```

```
LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<  
$this->setState(<choice.stateNumber>);  
$this->errorHandler->sync($this);
```

```
<preamble; separator="\n">  
while (<loopExpr>) {  
  <alts; separator="\n">  
  $this->setState(<choice.loopBackStateNumber>);  
  $this->errorHandler->sync($this);  
  <iteration>  
}  
>>
```

```
LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<  
$this->setState(<choice.blockStartStateNumber>); <! alt block decision !>  
$this->errorHandler->sync($this);
```

```
<preamble; separator="\n">  
do {  
  <alts; separator="\n">  
  $this->setState(<choice.stateNumber>); <! loopback/exit decision !>  
  $this->errorHandler->sync($this);  
  <iteration>  
} while (<loopExpr>);  
>>
```

```
// LL(*) stuff
```

```
AltBlock(choice, preamble, alts, error) ::= <<  
$this->setState(<choice.stateNumber>);  
$this->errorHandler->sync($this);  
<if(choice.label)><labelref(choice.label)> = $this->input->LT(1);<endif>  
<preamble; separator="\n">
```

```
switch ($this->getInterpreter()->adaptivePredict($this->input, <choice.decision>, $this->ctx)) {  
  <alts:{ alt |  
  case <i>:  
    <alt>  
  break;}; separator="\n\n">  
}  
>>
```

```

OptionalBlock(choice, alts, error) ::= <<
$this->setState(<choice.stateNumber>);
$this->errorHandler->sync($this);

switch ($this->getInterpreter()->adaptivePredict($this->input, <choice.decision>, $this->ctx)) {
<alts:{ alt |
  case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
  break;}; separator="\n\n">
}
>>

```

```

StarBlock(choice, alts, sync, iteration) ::= <<
$this->setState(<choice.stateNumber>);
$this->errorHandler->sync($this);

```

```

$alt = $this->getInterpreter()->adaptivePredict($this->input, <choice.decision>, $this->ctx);

```

```

while ($alt !== <choice.exitAlt> && $alt !== ATN::INVALID_ALT_NUMBER) {
if ($alt === 1<if(!choice.ast.greedy)>+1<endif>) {
  <iteration>
  <alts> <! should only be one !>
}

```

```

$this->setState(<choice.loopBackStateNumber>);
$this->errorHandler->sync($this);

```

```

$alt = $this->getInterpreter()->adaptivePredict($this->input, <choice.decision>, $this->ctx);
}
>>

```

```

PlusBlock(choice, alts, error) ::= <<
$this->setState(<choice.blockStartStateNumber>); <! alt block decision !>
$this->errorHandler->sync($this);

```

```

$alt = 1<if(!choice.ast.greedy)>+1<endif>;

```

```

do {
  switch ($alt) {
  <alts:{ alt|
  case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
  break;}; separator="\n\n">
  default:
    <error>
  }
}

```

```

$this->setState(<choice.loopBackStateNumber>); <! loopback/exit decision !>
$this->errorHandler->sync($this);

$alt = $this->getInterpreter()->adaptivePredict($this->input, <choice.decision>, $this->ctx);
} while ($alt !== <choice.exitAlt> && $alt !== ATN::INVALID_ALT_NUMBER);
>>

Sync(s) ::= "sync(<s.expecting.name>);"

ThrowNoViableAlt(t) ::= "throw new NoViableAltException($this);"

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">
>>

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) === 0
>>

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({<offsetShiftVar(s.varName, bits.shift)>}) && ((1 \<< <offsetShiftVar(s.varName,
bits.shift)>) & (<bits.ttypes:{ttype | (1 \<< <offsetShiftConst(ttype, bits.shift)>)}; separator=" | ">)) !== 0)
%>

isZero ::= [
"0":true,
default:false
]

offsetShiftVar(shiftAmount, offset) ::= <%
<if(!isZero.(offset))>(<$<shiftAmount> - <offset>)<else><$<shiftAmount><endif>
%>

offsetShiftConst(shiftAmount, offset) ::= <%
<if(!isZero.(offset))>(self::<shiftAmount> - <offset>)<else>self::<shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ttype | $<s.varName> === self::<ttype>}; separator=" || ">
%>

cases(ttypes) ::= <<
<ttypes:{t | case self::<t>}; separator="\n">
>>

```

```

InvokeRule(r, argExprsChunks) ::= <<
$this->setState(<r.stateNumber>);
<if(r.labels)><r.labels:{1 | <labelref(l)> = }><endif>$this-><if(r.ast.options.p)>recursive<r.name>;
format="cap"><else><r.name><endif>(<if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)>,<endif><endif>
<argExprsChunks>);
>>

```

```

MatchToken(m) ::= <<
$this->setState(<m.stateNumber>);
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>$this->match(self::<m.name>);
>>

```

```

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

```

```

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

```

```

CommonSetStuff(m, expr, capture, invert) ::= <<
$this->setState(<m.stateNumber>);

```

```

<if(m.labels)><m.labels:{1 | <labelref(l)> = }>$this->input->LT(1);<endif>
<capture>

```

```

if (<if(invert)>$<m.varName> \<= 0 || <else>!<endif>(<expr>)) {
    <if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>$this->errorHandler->recoverInline($this);
} else {
    if ($this->input->LA(1) === Token::EOF) {
        $this->matchedEOF = true;
    }

```

```

$this->errorHandler->reportMatch($this);
$this->consume();
}
>>

```

```

Wildcard(w) ::= <<
$this->setState(<w.stateNumber>);
<if(w.labels)><w.labels:{1 | <labelref(l)> = }><endif>$this->matchWildcard();
>>

```

```

// ACTION STUFF

```

```

Action(a, foo, chunks) ::= "<chunks>"

```

```

ArgAction(a, chunks) ::= "<chunks>"

```

```

SemPred(p, chunks, failChunks) ::= <<
$this->setState(<p.stateNumber>);

```

```

if (!(<chunks>)) {
    throw new FailedPredicateException($this, <p.predicate><if(failChunks)>, <failChunks><elseif(p.msg)>,
<p.msg><endif>);
}
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
    <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "$this->skip();"
LexerMoreCommand() ::= "$this->more();"
LexerPopModeCommand() ::= "$this->popMode();"

LexerTypeCommand(arg, grammar) ::= "$this->type = <arg>";
LexerChannelCommand(arg, grammar) ::= "$this->channel = <arg>";
LexerModeCommand(arg, grammar) ::= "$this->mode = <arg>";
LexerPushModeCommand(arg, grammar) ::= "$this->pushMode(<arg>);"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "$localContext-><a.name>"
LocalRef(a) ::= "$localContext-><a.name>"
RetValRef(a) ::= "$localContext-><a.name>"
QRetValRef(a) ::= "<ctx(a)>-><a.dict>-><a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>-><t.name>"
LabelRef(t) ::= "<ctx(t)>-><t.name>"
ListLabelRef(t) ::= "<ctx(t)>-><ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>-><s.name> = <rhsChunks>";

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getText() : null)"
TokenPropertyRef_type(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getType() : 0)"
TokenPropertyRef_line(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getLine() : 0)"
TokenPropertyRef_pos(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getCharPositionInLine() : 0)"
TokenPropertyRef_channel(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getChannel() : 0)"
TokenPropertyRef_index(t) ::= "<ctx(t)>-><t.label> !== null ? <ctx(t)>-><t.label>->getTokenIndex() : 0)"
TokenPropertyRef_int(t) ::= "<ctx(t)>-><t.label> !== null ? (int) <ctx(t)>-><t.label>->getText() : 0)"

RulePropertyRef_start(r) ::= "<ctx(r)>-><r.label> !== null ? (<ctx(r)>-><r.label>->start) : null)"
RulePropertyRef_stop(r) ::= "<ctx(r)>-><r.label> !== null ? (<ctx(r)>-><r.label>->stop) : null)"

```

```

RulePropertyRef_text(r) ::= "<ctx(r)>-><r.label> != null ? $this->input->getTextByTokens(<ctx(r)>-><r.label>->start, <ctx(r)>-><r.label>->stop) : null)"
RulePropertyRef_ctx(r) ::= "<ctx(r)>-><r.label>"
RulePropertyRef_parser(r) ::= "\$this"

ThisRulePropertyRef_start(r) ::= "$localContext->start"
ThisRulePropertyRef_stop(r) ::= "$localContext->stop"
ThisRulePropertyRef_text(r) ::= "$this->input->getTextByTokens($localContext->start, $this->input->LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "$localContext"
ThisRulePropertyRef_parser(r) ::= "$this"

NonLocalAttrRef(s) ::= "\$this->getInvokingContext(<s.ruleIndex>)-><s.name>"
SetNonLocalAttr(s, rhsChunks) ::= "\$this->getInvokingContext(<s.ruleIndex>)-><s.name> = <rhsChunks>;"

AddToLabelList(a) ::= "<ctx(a.label)>-><a.listName>[] = <labelref(a.label)>;"

TokenDecl(t) ::= "<TokenLabelType()> $<t.name>"
TokenTypeDecl(t) ::= ""
TokenListDecl(t) ::= "array $<t.name> = []"
RuleContextDecl(r) ::= "<r.ctxName> $<r.name>"
RuleContextListDecl(rdecl) ::= "array $<rdecl.name> = []"
AttributeDecl(d) ::= "<d.type> $<d.name><if(d.initValue)> = <d.initValue><endif>"

PropertiesDecl(struct) ::= <<
<if(struct.tokenListDecls)>
<struct.tokenListDecls : {d | /**
* @var array<Token>|null $<d.name>
*/
public $<d.name>;}; separator="\n\n">
<endif>
<if(struct.tokenDecls)>
<if(struct.tokenListDecls)>

<endif>
<struct.tokenDecls : {d | /**
* @var <TokenLabelType()>|null $<d.name>
*/
public $<d.name>;}; separator="\n\n">
<endif>
<if(struct.ruleContextDecls)>
<if(struct.tokenListDecls || struct.tokenDecls)>

<endif>
<struct.ruleContextDecls : {d | /**
* @var <d.ctxName>|null $<d.name>
*/
public $<d.name>;}; separator="\n\n">
<endif>

```

```

<if(struct.ruleContextListDecls)>
<if(struct.tokenListDecls || struct.tokenDecls || struct.ruleContextDecls)>

<endif>
<struct.ruleContextListDecls : { d | /**
* @var array<<d.ctxName>>|null $<d.name>
*/
public $<d.name>;}; separator="\n\n">
<endif>
<if(struct.attributeDecls)>
<if(struct.tokenListDecls || struct.tokenDecls || struct.ruleContextDecls || struct.ruleContextListDecls)>

<endif>
<struct.attributeDecls : { d | /**
* @var <d.type><if(!d.initValue)>|null<endif> $<d.name>
*/
public $<d.name><if(d.initValue)> = <d.initValue><endif>;}; separator="\n\n">
<endif>

>>

ContextTokenGetterDecl(t) ::= <<
public function <t.name>() : ?TerminalNode
{
    return $this->getToken(<parser.name>::<t.name>, 0);
}
>>

ContextTokenListGetterDecl(t) ::= <<
>>

ContextTokenListIndexedGetterDecl(t) ::= <<
/**
* @return array<<TerminalNode>|TerminalNode|null
*/
public function <t.name>(int $index = null)
{
    if ($index === null) {
        return $this->getTokens(<parser.name>::<t.name>);
    }

    return $this->getToken(<parser.name>::<t.name>, $index);
}
>>

ContextRuleGetterDecl(r) ::= <<
public function <r.name>() : ?<r.ctxName>
{

```

```

    return $this->getTypedRuleContext(<r.ctxName>::class, 0);
}
>>

ContextRuleListGetterDecl(r) ::= <<
>>

ContextRuleListIndexedGetterDecl(r) ::= <<
/**
 * @return array<<r.ctxName>>|<r.ctxName>|null
 */
public function <r.name>(?int $index = null)
{
    if ($index === null) {
        return $this->getTypedRuleContexts(<r.ctxName>::class);
    }

    return $this->getTypedRuleContext(<r.ctxName>::class, $index);
}
>>

LexerRuleContext() ::= "RuleContext"

/**
 * The rule context name is the rule followed by a suffix; e.g., r becomes rContext.
 */
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "<tokenName>"
ImplicitRuleLabel(ruleName) ::= "<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "$<d.varName> = \$this->input->LT(1);"
CaptureNextTokenType(d) ::= "$<d.varName> = $this->input->LA(1);"

StructDecl(struct,ctorAttrs,attrs,getters,dispatchMethods,interfaces,extensionMembers) ::= <<
class <struct.name> extends
<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif><if(interfaces)> implements
<interfaces; separator=", "><endif>
{
<PropertiesDecl(struct)>
public function __construct(?ParserRuleContext $parent, ?int $invokingState = null<ctorAttrs:{a | , ?<a> = null}> )
{
    parent::__construct($parent, $invokingState);
<if(struct.ctorAttrs)>

    <struct.ctorAttrs:{a | $this-><a.name> = $<a.name> ?? $this-><a.name>;}; separator="\n">

```

```

<endif>
}

public function getRuleIndex() : int
{
    return <parser.name>::RULE_<struct.derivedFromName>;
}
<if(getters)>

    <getters:{g | <g>}; separator="\n\n">
<endif>
<if(struct.provideCopyFrom)> <! don't need copy unless we have subclasses !>
public function copyFrom(ParserRuleContext $context) : void
{
    parent::copyFrom($context);

    <struct.attrs:{a | $this-><a.name> = $context-><a.name>;}; separator="\n">
}
<endif>
<if(dispatchMethods)>

    <dispatchMethods; separator="\n\n">
<endif>
<if(extensionMembers)>

    <extensionMembers; separator="\n\n">
<endif>
}
>>

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
class <struct.name> extends <struct.parentRule; format="cap">Context
{
    <PropertiesDecl(struct)>
    public function __construct(<struct.parentRule; format="cap">Context $context)
    {
        parent::__construct($context);

        $this->copyFrom($context);
    }
}
<if(getters)>

    <getters:{g | <g>}; separator="\n\n">
<endif>
<if(dispatchMethods)>

    <dispatchMethods; separator="\n\n">
<endif>

```

```

}
>>

ListenerDispatchMethod(method) ::= <<
public function <if(method.isEnter)>enter<else>exit<endif>Rule(ParseTreeListener $listener) : void
{
  if ($listener instanceof <parser.grammarName>Listener) {
    $listener-><if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">($this);
  }
}
>>

VisitorDispatchMethod(method) ::= <<
public function accept(ParseTreeVisitor $visitor)
{
  if ($visitor instanceof <parser.grammarName>Visitor) {
    return $visitor->visit<struct.derivedFromName; format="cap">($this);
  }

  return $visitor->visitChildren($this);
}
>>

/** If we don't know location of label def x, use this template */
labelref(x) ::= "<if(!x.isLocal)>$localContext-><endif><x.name>"

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "$localContext"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "\$this->precpred(\$this->ctx, <opPrec>)"

recRuleSetReturnAction(src,name) ::= "\$<name> = \$<src>-><name>;"

recRuleSetStopToken()      ::= "$this->ctx->stop = $this->input->LT(-1);"

recRuleAltStartAction(ruleName, ctxName, label, isListLabel) ::= <<
$localContext = new Context\\<ctxName>Context($parentContext, $parentState);
<if(label)>
<if(isListLabel)>
$localContext-><label>[] = $previousContext;
<else>
$localContext-><label> = $previousContext;
<endif>
<endif>

$this->pushNewRecursionContext($localContext, $startState, self::RULE_<ruleName>);
>>

```

```

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
$localContext = new Context\\<currentAltLabel; format="cap">Context(new Context\\<ruleName;
format="cap">Context($parentContext, $parentState));
<if(label)>
<if(isListLabel)>
$localContext-><label>[] = $previousContext;
<else>
$localContext-><label> = $previousContext;
<endif>
<endif>

```

```

$this->pushNewRecursionContext($localContext, $startState, self::RULE_<ruleName>);
>>

```

```

recRuleReplaceContext(ctxName) ::= <<
$localContext = new Context\\<ctxName>Context($localContext);
$this->ctx = $localContext;
$previousContext = $localContext;
>>

```

```

recRuleSetPrevCtx() ::= <<
if ($this->getParseListeners() !== null) {
    $this->triggerExitRuleEvent();
}

```

```

$previousContext = $localContext;
>>

```

```

LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
<lexer>
>>

```

```

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
namespace<if(lexerFile.genPackage)> <lexerFile.genPackage><endif> {
<if(namedActions.header)><namedActions.header><endif>
use Antlr\\Antlr4\\Runtime\\Atn\\ATNDeserializer;
use Antlr\\Antlr4\\Runtime\\Atn\\LexerATNSimulator;
use Antlr\\Antlr4\\Runtime\\Lexer;
use Antlr\\Antlr4\\Runtime\\CharStream;
use Antlr\\Antlr4\\Runtime\\PredictionContexts\\PredictionContextCache;
use Antlr\\Antlr4\\Runtime\\RuleContext;
use Antlr\\Antlr4\\Runtime\\Atn\\ATN;
use Antlr\\Antlr4\\Runtime\\Dfa\\DFA;
use Antlr\\Antlr4\\Runtime\\Vocabulary;
use Antlr\\Antlr4\\Runtime\\RuntimeMetaData;

```

```

use Antlr4\Runtime\VocabularyImpl;
<if(namedActions.definitions)><namedActions.definitions><endif>

final class <lexer.name> extends <superClass; null="Lexer">
{
<if(lexer.tokens)>
public const <lexer.tokens:{k | <k> = <lexer.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>

<if(lexer.channels)>
public const <lexer.channels:{c | <c> = <lexer.channels.(c)>}; separator=", ", wrap, anchor>;
<endif>

<if(rest(lexer.modes))>
public const <rest(lexer.modes){m | <m>=<i>}; separator=", ", wrap, anchor>;
<endif>

/**
 * @var array<string>
 */
public const CHANNEL_NAMES = [
'DEFAULT_TOKEN_CHANNEL', 'HIDDEN'<if (lexer.channels)>, <lexer.channels:{c | '<c>'}; separator=", ",
wrap, anchor><endif>
];

/**
 * @var array<string>
 */
public const MODE_NAMES = [
<lexer.modes:{m | '<m>'}; separator=", ", wrap, anchor>
];

/**
 * @var array<string>
 */
public const RULE_NAMES = [
<lexer.ruleNames:{r | '<r>'}; separator=", ", wrap, anchor>
];

<vocabulary(lexer.literalNames, lexer.symbolicNames)>

<atn>
protected static $atn;
protected static $decisionToDFA;
protected static $sharedContextCache;
<if(namedActions.members)>

<namedActions.members>

```

<endif>

```
public function __construct(CharStream $input)
{
    parent::__construct($input);

    self::initialize();

    $this->interp = new LexerATNSimulator($this, self::$satn, self::$decisionToDFA, self::$sharedContextCache);
}

private static function initialize() : void
{
    if (self::$satn !== null) {
        return;
    }

    RuntimeMetaData::checkVersion('<lexerFile.ANTLRVersion>', RuntimeMetaData::VERSION);

    $satn = (new ATNDeserializer()->deserialize(self::SERIALIZED_ATN);

    $decisionToDFA = [];
    for ($i = 0, $count = $satn->getNumberOfDecisions(); $i < $count; $i++) {
        $decisionToDFA[] = new DFA($satn->getDecisionState($i), $i);
    }

    self::$satn = $satn;
    self::$decisionToDFA = $decisionToDFA;
    self::$sharedContextCache = new PredictionContextCache();
}

public static function vocabulary() : Vocabulary
{
    static $vocabulary;

    return $vocabulary = $vocabulary ?? new VocabularyImpl(self::LITERAL_NAMES, self::SYMBOLIC_NAMES);
}

public function getGrammarFileName() : string
{
    return '<lexer.grammarFileName>';
}

public function getRuleNames() : array
{
    return self::RULE_NAMES;
}
```

```

public function getSerializedATN() : string
{
    return self::SERIALIZED_ATN;
}

/**
 * @return array<string>
 */
public function getChannelNames() : array
{
    return self::CHANNEL_NAMES;
}

/**
 * @return array<string>
 */
public function getModeNames() : array
{
    return self::MODE_NAMES;
}

public function getATN() : ATN
{
    return self::$atn;
}

public function getVocabulary() : Vocabulary
{
    return self::vocabulary();
}
<dumpActions(lexer, "", actionFuncs, sempredFuncs)>
}
}
>>

SerializedATN(model) ::= <<
<if(rest(model.segments))>
/**
 * @var string
 */
private const SERIALIZED_ATN =
    <model.segments:{segment| "<segment; wrap={" .<n>"}>"}; separator=" .\n">;
<else>
/**
 * @var string
 */
private const SERIALIZED_ATN =
    "<model.serialized; wrap={" .<n>  "}>";

```

```

<endif>
>>

/**
 * Using a type to init value map, try to init a type; if not in table
 * must be an object, default value is `null`.
 */
initValue(typeName) ::= <<
<phpTypeInitMap.(typeName)>
>>

```

```
codeFileExtension() ::= ".php"
```

Found in path(s):

```

* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/PHP/PHP.stg

```

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```

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 * (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
 * THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
 */

```

```

tree grammar BlockSetTransformer;
options {
    language    = Java;
    tokenVocab  = ANTLRParser;
    ASTLabelType = GrammarAST;
    output      = AST;
    filter      = true;
}

@header {
package org.antlr.v4.parse;
import org.antlr.v4.misc.Utils;
import org.antlr.v4.misc.*;
import org.antlr.v4.tool.*;
import org.antlr.v4.tool.ast.*;
import java.util.List;
import java.util.Set;
import java.util.HashSet;
import java.util.ArrayList;
import org.antlr.v4.runtime.misc.IntervalSet;
}

@members {
public String currentRuleName;
public GrammarAST currentAlt;
public Grammar g;
public BlockSetTransformer(TreeNodeStream input, Grammar g) {
    this(input, new RecognizerSharedState());
    this.g = g;
}
}

topdown
: ^(RULE (id=TOKEN_REF|id=RULE_REF) {currentRuleName=$id.text;} .+)
| setAlt
| ebnfBlockSet
| blockSet
;

setAlt
: {inContext("RULE BLOCK")}?
  ALT {currentAlt = $start;}
;

// (BLOCK (ALT (+ (BLOCK (ALT INT) (ALT ID))))))
ebnfBlockSet
@after {
    GrammarTransformPipeline.setGrammarPtr(g, $tree);
}

```

```

}
: ^(ebnfSuffix blockSet) -> ^(ebnfSuffix ^(BLOCK<BlockAST> ^(ALT<AltAST> blockSet)))
;

ebnfSuffix
@after {$tree = (GrammarAST)adaptor.dupNode($start);}
: OPTIONAL
| CLOSURE
| POSITIVE_CLOSURE
;

blockSet
@init {
boolean inLexer = Grammar.isTokenName(currentRuleName);
}
@after {
GrammarTransformPipeline.setGrammarPtr(g, $tree);
}
: {inContext("RULE")}? // top-level: rule block and > 1 alt
^(BLOCK ^(alt=ALT elementOptions? {((AltAST)$alt).altLabel==null}? setElement[inLexer]) (^(ALT
elementOptions? setElement[inLexer]) )+
-> ^(BLOCK<BlockAST>[$BLOCK.token] ^(ALT<AltAST>[$BLOCK.token,"ALT"] ^(SET[$BLOCK.token,
"SET"] setElement+)))
| {!inContext("RULE")}? // if not rule block and > 1 alt
^(BLOCK ^(ALT elementOptions? setElement[inLexer]) (^(ALT elementOptions? setElement[inLexer]) )+
-> ^(SET[$BLOCK.token, "SET"] setElement+))
;

setElement[boolean inLexer]
@after {
GrammarTransformPipeline.setGrammarPtr(g, $tree);
}
: (^(a=STRING_LITERAL elementOptions) {!inLexer ||
CharSupport.getCharValueFromGrammarCharLiteral($a.getText())!=-1}?
| a=STRING_LITERAL {!inLexer || CharSupport.getCharValueFromGrammarCharLiteral($a.getText())!=-1}?
| {!inLexer}?=> ^(TOKEN_REF elementOptions)
| {!inLexer}?=> TOKEN_REF
| {inLexer}?=> ^(RANGE a=STRING_LITERAL b=STRING_LITERAL)
{CharSupport.getCharValueFromGrammarCharLiteral($a.getText())!=-1 &&
CharSupport.getCharValueFromGrammarCharLiteral($b.getText())!=-1}?
)
;

elementOptions
: ^(ELEMENT_OPTIONS elementOption*)
;

elementOption

```

```
: ID
| ^(ASSIGN id=ID v=ID)
| ^(ASSIGN ID v=STRING_LITERAL)
| ^(ASSIGN ID v=ACTION)
| ^(ASSIGN ID v=INT)
;
```

Found in path(s):

```
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/parse/BlockSetTransformer.g
```

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```
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* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*/

/** ANTLR tool checks output templates are compatible with tool code generation.
* For now, a simple string match used on x.y of x.y.z scheme.
* Must match Tool.VERSION during load to templates.
*
* REQUIRED.
```

```

*/

pythonTypeInitMap ::= [
  "bool":"False",
  "int":"0",
  "float":"0.0",
  "str": "",
  default:"None" // anything other than a primitive type is an object
]

// args must be <object-model-object>, <fields-resulting-in-STs>

ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
# encoding: utf-8
from __future__ import print_function
from antlr4 import *
from io import StringIO
import sys

<namedActions.header>
<parser>

>>

ListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
from antlr4 import *
<header>

# This class defines a complete listener for a parse tree produced by <file.parserName>.
class <file.grammarName>Listener(ParseTreeListener):

    <file.listenerNames:{lname |
# Enter a parse tree produced by <file.parserName>#<lname>.
def enter<lname; format="cap">(self, ctx):
    pass

# Exit a parse tree produced by <file.parserName>#<lname>.
def exit<lname; format="cap">(self, ctx):
    pass

}; separator="\n">

>>

VisitorFile(file, header, namedActions) ::= <<

```

```

<fileHeader(file.grammarFileName, file.ANTLRVersion)>
from antlr4 import *
<header>

# This class defines a complete generic visitor for a parse tree produced by <file.parserName>.

class <file.grammarName>Visitor(ParseTreeVisitor):

    <file.visitorNames:{lname |
# Visit a parse tree produced by <file.parserName>#<lname>.
def visit<lname; format="cap">(self, ctx):
    return self.visitChildren(ctx)

}; separator="\n">

>>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
# Generated from <grammarFileName> by ANTLR <ANTLRVersion>
>>

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
<if(superClass)>
if __name__ is not None and "." in __name__:
    from .<superClass> import <superClass>
else:
    from <superClass> import <superClass>

<endif>
<atn>

class <parser.name> ( <if(superClass)><superClass><else>Parser<endif> ):

    grammarFileName = "<parser.grammarFileName>"

    atn = ATNDeserializer().deserialize(serializedATN())

    decisionsToDFA = [ DFA(ds, i) for i, ds in enumerate(atn.decisionToState) ]

    sharedContextCache = PredictionContextCache()

    literalNames = [ <parser.literalNames:{t | u<t>}; null="u"\<INVALID>\'", separator=", ", wrap, anchor ]

```

```

symbolicNames = [ <parser.symbolicNames:{t | u<t>}; null="u\"<INVALID>\"", separator=", ", wrap, anchor ]

<if(parser.rules)>
<parser.rules:{r | RULE_<r.name> = <r.index>}; separator="\n", wrap, anchor>
<endif>

ruleNames = [ <parser.ruleNames:{r | u"<r>"}; separator=", ", wrap, anchor ]

EOF = <TokenLabelType>.EOF
<if(parser.tokens)>
<parser.tokens:{k | <k>=<parser.tokens.(k)>}; separator="\n", wrap, anchor>
<endif>

<parser:(ctor())>

<namedActions.members>

<funcs; separator="\n">

<if(sembredFuncs)>
def sembred(self, localctx, ruleIndex, predIndex):
    if self._predicates == None:
        self._predicates = dict()
<parser.sembredFuncs.values:{ f |
    self._predicates[<f.ruleIndex>] = self.<f.name>_sembred }; separator="\n    ">
    pred = self._predicates.get(ruleIndex, None)
    if pred is None:
        raise Exception("No predicate with index:" + str(ruleIndex))
    else:
        return pred(localctx, predIndex)

<sembredFuncs.values; separator="\n">
<endif>

>>

dumpActions(recog, argFuncs, actionFuncs, sembredFuncs) ::= <<
<if(actionFuncs)>
def action(self, localctx, ruleIndex, actionIndex):
    if self._actions is None:
        actions = dict()
<recog.actionFuncs.values:{ f |
    actions[<f.ruleIndex>] = self.<f.name>_action }; separator="\n">
    self._actions = actions
    action = self._actions.get(ruleIndex, None)

```

```

    if action is not None:
        action(localctx, actionIndex)
    else:
        raise Exception("No registered action for:" + str(ruleIndex))

<actionFuncs.values; separator="\n">

<endif>
<if(sempredFuncs)>
def sempred(self, localctx, ruleIndex, predIndex):
    if self._predicates is None:
        preds = dict()
    <recog.sempredFuncs.values:{f}
        preds[<f.ruleIndex>] = self.<f.name>_sempred}; separator="\n">
        self._predicates = preds
    pred = self._predicates.get(ruleIndex, None)
    if pred is not None:
        return pred(localctx, predIndex)
    else:
        raise Exception("No registered predicate for:" + str(ruleIndex))

<sempredFuncs.values; separator="\n">
<endif>
>>

parser_ctor(p) ::= <<
def __init__(self, input, output=sys.stdout):
    super(<parser.name>, self).__init__(input, output=output)
    self.checkVersion("<file.ANTLRVersion>")
    self._interp = ParserATNSimulator(self, self.atn, self.decisionsToDFA, self.sharedContextCache)
    self._predicates = None

>>

/* This generates a private method since the actionIndex is generated, making an
 * overriding implementation impossible to maintain.
 */
RuleActionFunction(r, actions) ::= <<

def <r.name>_action(self, localctx , actionIndex):
<actions:{index|
<if(first(actions))>
    if actionIndex == <index>:
        <actions.(index)>
<elseif(rest(actions))>
    elif actionIndex == <index>:
        <actions.(index)>
<endif> }; separator="\n">

```

```
>>
```

```
/* This generates a private method since the predIndex is generated, making an  
* overriding implementation impossible to maintain.  
*/
```

```
RuleSempredFunction(r, actions) ::= <<  
def <r.name>_sempred(self, localctx, predIndex):  
    <actions:{index|  
<if(first(actions))>  
        if predIndex == <index>:  
            return <actions.(index)>  
<elseif(rest(actions))>  
        elif predIndex == <index>:  
            return <actions.(index)>  
<endif> }; separator="\n">
```

```
>>
```

```
RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)  
::= <<
```

```
<ruleCtx>
```

```
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">
```

```
def <currentRule.name>(self<currentRule.args:{a | , <a.name>}>):
```

```
    localctx = <parser.name>.<currentRule.ctxType>(self, self._ctx, self.state<currentRule.args:{a | , <a.name>}>)  
    self.enterRule(localctx, <currentRule.startState>, self.RULE_<currentRule.name>)  
    <namedActions.init>  
    <locals; separator="\n">  
    try:  
        <code>  
        <postamble; separator="\n">  
        <namedActions.after>  
    <if(exceptions)>  
    <exceptions; separator="\n">  
    <else>  
    except RecognitionException as re:  
        localctx.exception = re  
        self._errHandler.reportError(self, re)  
        self._errHandler.recover(self, re)  
    <endif>  
    finally:  
        <finallyAction>  
        self.exitRule()  
    return localctx
```

>>

```
LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,  
namedActions,finallyAction,postamble) ::=
```

<<

```
<ruleCtx>
```

```
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">
```

```
def <currentRule.name>(self, _p=0<if(currentRule.args)>, <args:{a | , <a>}><endif>):
```

```
  _parentctx = self._ctx
```

```
  _parentState = self.state
```

```
  localctx = <parser.name>.<currentRule.ctxType>(self, self._ctx, _parentState<args:{a | , <a.name>}>)
```

```
  _prevctx = localctx
```

```
  _startState = <currentRule.startState>
```

```
  self.enterRecursionRule(localctx, <currentRule.startState>, self.RULE_<currentRule.name>, _p)
```

```
  <namedActions.init>
```

```
  <locals; separator="\n">
```

```
  try:
```

```
    <code>
```

```
    <postamble; separator="\n">
```

```
    <namedActions.after>
```

```
  except RecognitionException as re:
```

```
    localctx.exception = re
```

```
    self._errHandler.reportError(self, re)
```

```
    self._errHandler.recover(self, re)
```

```
  finally:
```

```
    <finallyAction>
```

```
    self.unrollRecursionContexts(_parentctx)
```

```
  return localctx
```

>>

```
CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
```

```
<if(currentOuterMostAltCodeBlock.altLabel)>localctx = <parser.name>.<currentOuterMostAltCodeBlock.altLabel>;  
format="cap">Context(self, localctx)<endif>
```

```
self.enterOuterAlt(localctx, <currentOuterMostAltCodeBlock.alt.altNum>)
```

```
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
```

>>

```
CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
```

```
<locals; separator="\n">
```

```
<preamble; separator="\n">
```

```
<ops; separator="\n">
```

>>

```
LL1AltBlock(choice, preamble, alts, error) ::= <<
```

```
self.state = <choice.stateNumber>
```

```

self._errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = _input.LT(1)<endif>
<preamble; separator="\n">
token = self._input.LA(1)
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  pass }; separator="\nel">
else:
  <error>

>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
token = self._input.LA(1)
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
  <alt>
  pass }; separator="\nel">
else:
  pass
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<preamble; separator="\n">
if <expr>:
  <alts; separator="\n">

<!else if ( !(<followExpr> ) ) <error!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<preamble; separator="\n">
while <loopExpr>:
  <alts; separator="\n">
  self.state = <choice.loopBackStateNumber>
  self._errHandler.sync(self)
  <iteration>

>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
self.state = <choice.blockStartStateNumber> <! alt block decision !>

```

```

self._errHandler.sync(self)
<preamble; separator="\n">
while True:
    <alts; separator="\n">
    self.state = <choice.stateNumber> <! loopback/exit decision !>
    self._errHandler.sync(self)
    <iteration>
    if not (<loopExpr>):
        break

>>

// LL(*) stuff

AltBlock(choice, preamble, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
<if(choice.label)><labelref(choice.label)> = _input.LT(1)<endif>
<preamble; separator="\n">
la_ = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
<alts:{ alt |
if la_ == <i>:
    <alt>
    pass
}; separator="\nel">

>>

OptionalBlock(choice, alts, error) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
la_ = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
<alts:{ alt |
if la_ == <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
}; separator="\nel">

>>

StarBlock(choice, alts, sync, iteration) ::= <<
self.state = <choice.stateNumber>
self._errHandler.sync(self)
_alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)
while _alt!=<choice.exitAlt> and _alt!=ATN.INVALID_ALT_NUMBER:
    if _alt==1<if(!choice.ast.greedy)>+1<endif>:
        <iteration>
        <alts> <! should only be one !>
    self.state = <choice.loopBackStateNumber>

```

```

self._errHandler.sync(self)
_alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)

>>

PlusBlock(choice, alts, error) ::= <<
self.state = <choice.blockStartStateNumber> <! alt block decision !>
self._errHandler.sync(self)
_alt = 1<if(!choice.ast.greedy)>+1<endif>
while _alt!=<choice.exitAlt> and _alt!=ATN.INVALID_ALT_NUMBER:
  <alts:{alt|
if _alt == <i><if(!choice.ast.greedy)>+1<endif>:
  <alt>
}; separator="\nел">
  else:
    <error>
self.state = <choice.loopBackStateNumber> <! loopback/exit decision !>
self._errHandler.sync(self)
_alt = self._interp.adaptivePredict(self._input,<choice.decision>,self._ctx)

>>

Sync(s) ::= "sync(<s.expecting.name>)"

ThrowNoViableAlt(t) ::= "raise NoViableAltException(self)"

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" or ">
>>

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({<offsetShiftVar(s.varName, bits.shift)>})> and ((1 \<< <offsetShiftVar(s.varName,
bits.shift)>) & (<bits.ttypes:{ttype | (1 \<< <offsetShiftType(ttype, bits.shift)>)}; separator=" | ">)) != 0)
%>

isZero ::= [
"0":true,
default:false
]

offsetShiftVar(shiftAmount, offset) ::= <%

```

```

<if(!isZero(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

offsetShiftType(shiftAmount, offset) ::= <%
<if(!isZero(offset))><parser.name>.<shiftAmount> - <offset><else><parser.name>.<shiftAmount><endif>
%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ ttype | <s.varName>==<parser.name>.<ttype> }; separator=" or ">
%>

cases(ttypes) ::= <<
if token in [<ttypes:{ t | <parser.name>.<t> }; separator=", ">]:
>>

InvokeRule(r, argExprsChunks) ::= <<
self.state = <r.stateNumber>
<if(r.labels)><r.labels:{1 | <labelref(l)> =
}><endif>self.<r.name><(if(r.ast.options.p)><r.ast.options.p><(if(argExprsChunks)><endif><endif><argExprsChu
nks)>
>>

MatchToken(m) ::= <<
self.state = <m.stateNumber>
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><endif>self.match(<parser.name>.<m.name>)
>>

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

CommonSetStuff(m, expr, capture, invert) ::= <<
self.state = <m.stateNumber>
<if(m.labels)><m.labels:{1 | <labelref(l)> = }>self._input.LT(1)<endif>
<capture>
<if(invert)>if <m.varName> \<= 0 or <expr><else>if not(<expr><endif>:
<if(m.labels)><m.labels:{1 | <labelref(l)> = }><else> <endif>self._errHandler.recoverInline(self)
else:
  self._errHandler.reportMatch(self)
  self.consume()
>>

Wildcard(w) ::= <<
self.state = <w.stateNumber>
<if(w.labels)><w.labels:{1 | <labelref(l)> = }><endif>self.matchWildcard()
>>

```

```

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
self.state = <p.stateNumber>
if not <chunks>:
    from antlr4.error.Errors import FailedPredicateException
    raise FailedPredicateException(self, <p.predicate><if(failChunks)>, <failChunks><elseif(p.msg)>,
<p.msg><endif>)
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
except <catchArg>:
    <catchAction>
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "skip()"
LexerMoreCommand() ::= "more()"
LexerPopModeCommand() ::= "popMode()"

LexerTypeCommand(arg, grammar) ::= "_type = <arg>"
LexerChannelCommand(arg, grammar) ::= "_channel = <arg>"
LexerModeCommand(arg, grammar) ::= "_mode = <arg>"
LexerPushModeCommand(arg, grammar) ::= "pushMode(<arg>)"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "localctx.<a.name>"
LocalRef(a) ::= "localctx.<a.name>"
RetValRef(a) ::= "localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>"

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "(None if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.text)"
TokenPropertyRef_type(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.type)"
TokenPropertyRef_line(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.line)"

```

```

TokenPropertyRef_pos(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.column)"
TokenPropertyRef_channel(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.channel)"
TokenPropertyRef_index(t) ::= "(0 if <ctx(t)>.<t.label> is None else <ctx(t)>.<t.label>.tokenIndex)"
TokenPropertyRef_int(t) ::= "(0 if <ctx(t)>.<t.label> is None else int(<ctx(t)>.<t.label>.text))"

RulePropertyRef_start(r) ::= "(None if <ctx(r)>.<r.label> is None else <ctx(r)>.<r.label>.start)"
RulePropertyRef_stop(r) ::= "(None if <ctx(r)>.<r.label> is None else <ctx(r)>.<r.label>.stop)"
RulePropertyRef_text(r) ::= "(None if <ctx(r)>.<r.label> is None else
self._input.getText(<ctx(r)>.<r.label>.start,<ctx(r)>.<r.label>.stop))"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "self"

ThisRulePropertyRef_start(r) ::= "localctx.start"
ThisRulePropertyRef_stop(r) ::= "localctx.stop"
ThisRulePropertyRef_text(r) ::= "self._input.getText(localctx.start, self._input.LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "localctx"
ThisRulePropertyRef_parser(r) ::= "self"

NonLocalAttrRef(s) ::= "self.getInvokingContext(<s.ruleIndex>).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::= "self.getInvokingContext(<s.ruleIndex>).<s.name> = <rhsChunks>"

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.append(<labelref(a.label)>)"

TokenDecl(t) ::= "self.<t.name> = None # <TokenLabelType()>"
TokenTypeDecl(t) ::= "self.<t.name> = 0 # <TokenLabelType()> type"
TokenListDecl(t) ::= "self.<t.name> = list() # of <TokenLabelType()>s"
RuleContextDecl(r) ::= "self.<r.name> = None # <r.ctxName>"
RuleContextListDecl(rdecl) ::= "self.<rdecl.name> = list() # of <rdecl.ctxName>s"

ContextTokenGetterDecl(t) ::= <<
def <t.name>(self):
    return self.getToken(<parser.name>.<t.name>, 0)
>>

// should never be called
ContextTokenListGetterDecl(t) ::= <<
def <t.name>_list(self):
    return self.getTokens(<parser.name>.<t.name>)
>>

ContextTokenListIndexedGetterDecl(t) ::= <<
def <t.name>(self, i=None):
    if i is None:
        return self.getTokens(<parser.name>.<t.name>)
    else:
        return self.getToken(<parser.name>.<t.name>, i)
>>

```

```

ContextRuleGetterDecl(r) ::= <<
def <r.name>(self):
    return self.getTypedRuleContext(<parser.name>.<r.ctxName>,0)

>>

// should never be called
ContextRuleListGetterDecl(r) ::= <<
def <r.name>_list(self):
    return self.getTypedRuleContexts(<parser.name>.<r.ctxName>)

>>

ContextRuleListIndexedGetterDecl(r) ::= <<
def <r.name>(self, i=None):
    if i is None:
        return self.getTypedRuleContexts(<parser.name>.<r.ctxName>)
    else:
        return self.getTypedRuleContext(<parser.name>.<r.ctxName>,i)

>>

LexerRuleContext() ::= "RuleContext"

/** The rule context name is the rule followed by a suffix; e.g.,
 * r becomes rContext.
 */
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenName>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "<label>"

CaptureNextToken(d) ::= "<d.varName> = self._input.LT(1)"
CaptureNextTokenType(d) ::= "<d.varName> = self._input.LA(1)"

StructDecl(struct,ctorAttrs,attrs,getters,dispatchMethods,interfaces,extensionMembers) ::= <<
class <struct.name>(<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif>):

    def __init__(self, parser, parent=None, invokingState=-1<struct.ctorAttrs:{a | , <a.name>=None}>):
        super(<parser.name>.<struct.name>, self).__init__(parent, invokingState)
        self.parser = parser
        <attrs:{a | <a>}; separator="\n">
        <struct.ctorAttrs:{a | self.<a.name> = <a.name>}; separator="\n">

        <getters:{g | <g>}; separator="\n\n">

```

```

def getRuleIndex(self):
    return <parser.name>.RULE_<struct.derivedFromName>

<if(struct.provideCopyFrom)> <! don't need copy unless we have subclasses !>
def copyFrom(self, ctx):
    super(<parser.name>.<struct.name>, self).copyFrom(ctx)
    <struct.attrs:{ a | self.<a.name> = ctx.<a.name>}; separator="\n">

<endif>
<dispatchMethods; separator="\n">
<extensionMembers; separator="\n">

>>

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
class <struct.name>(<currentRule.name; format="cap">Context):

    def __init__(self, parser, ctx): # actually a <parser.name>.<currentRule.name; format="cap">Context)
        super(<parser.name>.<struct.name>, self).__init__(parser)
        <attrs:{ a | <a>}; separator="\n">
        self.copyFrom(ctx)

    <getters:{ g | <g>}; separator="\n">

    <dispatchMethods; separator="\n">

>>

ListenerDispatchMethod(method) ::= <<
def <if(method.isEnter)>enter<else>exit<endif>Rule(self, listener):
    if hasattr(listener, "<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">"):
        listener.<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName; format="cap">(self)

>>

VisitorDispatchMethod(method) ::= <<
def accept(self, visitor):
    if hasattr(visitor, "visit<struct.derivedFromName; format="cap">"):
        return visitor.visit<struct.derivedFromName; format="cap">(self)
    else:
        return visitor.visitChildren(self)

>>

AttributeDecl(d) ::= "self.<d.name> = <if(d.initValue)><d.initValue><else>None<endif>"

/** If we don't know location of label def x, use this template */
labelref(x) ::= "<if(!x.isLocal)>localctx.<endif><x.name>"

```

```

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "localctx"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "self.precpred(self._ctx, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name>=$<src>.<name>"
recRuleSetStopToken() ::= "self._ctx.stop = self._input.LT(-1)"

recRuleAltStartAction(ruleName, ctxName, label) ::= <<
localctx = <parser.name>.<ctxName>Context(self, _parentctx, _parentState)
<if(label)>localctx.<label> = _prevctx<endif>
self.pushNewRecursionContext(localctx, _startState, self.RULE_<ruleName>)
>>

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
localctx = <parser.name>.<currentAltLabel; format="cap">Context(self, <parser.name>.<ruleName;
format="cap">Context(self, _parentctx, _parentState))
<if(label)>
<if(isListLabel)>
localctx.<label>.append(_prevctx)
<else>
localctx.<label> = _prevctx
<endif>
<endif>
self.pushNewRecursionContext(localctx, _startState, self.RULE_<ruleName>)
>>

recRuleReplaceContext(ctxName) ::= <<
localctx = <parser.name>.<ctxName>Context(self, localctx)
self._ctx = localctx
_prevctx = localctx
>>

recRuleSetPrevCtx() ::= <<
if self._parseListeners is not None:
    self.triggerExitRuleEvent()
_prevctx = localctx
>>

LexerFile(lexerFile, lexer, namedActions) ::= <<
<fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
# encoding: utf-8
from __future__ import print_function
from antlr4 import *
from io import StringIO

```

```

import sys

<namedActions.header>

<lexer>
>>

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
<if(superClass)>
if __name__ is not None and "." in __name__:
    from .<superClass> import <superClass>
else:
    from <superClass> import <superClass>

<endif>

<atn>

class <lexer.name>(<if(superClass)><superClass><else>Lexer<endif>):

    atn = ATNDeserializer().deserialize(serializedATN())

    decisionsToDFA = [ DFA(ds, i) for i, ds in enumerate(atn.decisionToState) ]

<if(lexer.channels)>
    <lexer.channels: {c| <c> = <lexer.channels.(c)>}; separator="\n">

<endif>
<if(rest(lexer.modes)>
    <rest(lexer.modes): {m| <m> = <i>}; separator="\n">

<endif>
<if(lexer.tokens)>
    <lexer.tokens: {k| <k> = <lexer.tokens.(k)>}; separator="\n", wrap, anchor>
<endif>

    channelNames = [ u"DEFAULT_TOKEN_CHANNEL", u"HIDDEN"<if (lexer.channels)>, <lexer.channels: {c|
u"<c>"}; separator=", ", wrap, anchor><endif> ]

    modeNames = [ <lexer.modes: {m| u"<m>"}; separator=", ", wrap, anchor> ]

    literalNames = [ u"\<INVALID>",
        <lexer.literalNames: {t| u"<t>"}; separator=", ", wrap, anchor> ]

    symbolicNames = [ u"\<INVALID>",
        <lexer.symbolicNames: {t| u"<t>"}; separator=", ", wrap, anchor> ]

    ruleNames = [ <lexer.ruleNames: {r| u"<r>"}; separator=", ", wrap, anchor> ]

```

```

grammarFileName = u"<lexer.grammarFileName>"

def __init__(self, input=None, output=sys.stdout):
    super(<lexer.name>, self).__init__(input, output=output)
    self.checkVersion("<lexerFile.ANTLRVersion>")
    self._interp = LexerATNSimulator(self, self.atn, self.decisionsToDFA, PredictionContextCache())
    self._actions = None
    self._predicates = None

<namedActions.members>

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>

>>

SerializedATN(model) ::= <<
<! only one segment, can be inlined !>

def serializedATN():
    with StringIO() as buf:
        buf.write(u"<model.serialized; wrap={ }<\n>    buf.write(u" }>")
        return buf.getvalue()

>>

/** Using a type to init value map, try to init a type; if not in table
 * must be an object, default value is "null".
 */
initValue(typeName) ::= <<
<pythonTypeInitMap.(typeName)>
>>

codeFileExtension() ::= ".py"

Found in path(s):
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/Python2/Python2.stg
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 \*/

```
tree grammar SourceGenTriggers;
options {
language    = Java;
tokenVocab = ANTLRParser;
ASTLabelType = GrammarAST;
}
```

```
@header {
package organtlr.v4.codegen;
import organtlr.v4.misc.Utils;
import organtlr.v4.codegen.model.*;
import organtlr.v4.codegen.model.decl.*;
import organtlr.v4.tool.*;
import organtlr.v4.tool.ast.*;
import java.util.Collections;
import java.util.Map;
import java.util.HashMap;
}
```

```
@members {
public OutputModelController controller;
public boolean hasLookaheadBlock;
public SourceGenTriggers(TreeNodeStream input, OutputModelController controller) {
this(input);
this.controller = controller;
}
```

```
}
```

```
dummy : block[null, null] ;
```

```
block[GrammarAST label, GrammarAST ebnfRoot] returns [List<? extends SrcOp> omos]
```

```
: ^( blk=BLOCK (^ (OPTIONS .+))?)
```

```
{List<CodeBlockForAlt> alts = new ArrayList<CodeBlockForAlt>();}
```

```
( alternative {alts.add($alternative.altCodeBlock);} )+
```

```
)
```

```
{
```

```
if ( alts.size()==1 && ebnfRoot==null) return alts;
```

```
if ( ebnfRoot==null ) {
```

```
    $omos = DefaultOutputModelFactory.list(controller.getChoiceBlock((BlockAST)$blk, alts, $label));
```

```
}
```

```
else {
```

```
    Choice choice = controller.getEBNFBlock($ebnfRoot, alts);
```

```
    hasLookaheadBlock |= choice instanceof PlusBlock || choice instanceof StarBlock;
```

```
    $omos = DefaultOutputModelFactory.list(choice);
```

```
}
```

```
}
```

```
;
```

```
alternative returns [CodeBlockForAlt altCodeBlock, List<SrcOp> ops]
```

```
@init {
```

```
    boolean outerMost = inContext("RULE BLOCK");
```

```
}
```

```
@after {
```

```
    controller.finishAlternative($altCodeBlock, $ops, outerMost);
```

```
}
```

```
: a=alt[outerMost] { $altCodeBlock=$a.altCodeBlock; $ops=$a.ops; }
```

```
;
```

```
alt[boolean outerMost] returns [CodeBlockForAlt altCodeBlock, List<SrcOp> ops]
```

```
@init {
```

```
    // set alt if outer ALT only (the only ones with alt field set to Alternative object)
```

```
    AltAST altAST = (AltAST)retval.start;
```

```
    if ( outerMost ) controller.setCurrentOuterMostAlt(altAST.alt);
```

```
}
```

```
: {
```

```
    List<SrcOp> elems = new ArrayList<SrcOp>();
```

```
    // TODO: shouldn't we pass $start to controller.alternative()?
```

```
    $altCodeBlock = controller.alternative(controller.getCurrentOuterMostAlt(), outerMost);
```

```
    $altCodeBlock.ops = $ops = elems;
```

```
    controller.setCurrentBlock($altCodeBlock);
```

```
}
```

```
^( ALT elementOptions? ( element {if ($element.omos!=null) elems.addAll($element.omos);} )+ )
```

```
| ^(ALT elementOptions? EPSILON)
```

```

    {SaltCodeBlock = controller.epsilon(controller.getCurrentOuterMostAlt(), outerMost);}
;

element returns [List<? extends SrcOp> omos]
: labeledElement { $omos = $labeledElement.omos;}
| atom[null,false] { $omos = $atom.omos;}
| subrule { $omos = $subrule.omos;}
| ACTION { $omos = controller.action((ActionAST)$ACTION);}
| SEMPRED { $omos = controller.sempred((ActionAST)$SEMPRED);}
| ^(ACTION elementOptions) { $omos = controller.action((ActionAST)$ACTION);}
| ^(SEMPRED elementOptions) { $omos = controller.sempred((ActionAST)$SEMPRED);}
;

labeledElement returns [List<? extends SrcOp> omos]
: ^(ASSIGN ID atom[$ID,false] ) { $omos = $atom.omos;}
| ^(PLUS_ASSIGN ID atom[$ID,false]) { $omos = $atom.omos;}
| ^(ASSIGN ID block[$ID,null] ) { $omos = $block.omos;}
| ^(PLUS_ASSIGN ID block[$ID,null]) { $omos = $block.omos;}
;

subrule returns [List<? extends SrcOp> omos]
: ^(OPTIONAL b=block[null,$OPTIONAL])
{
    $omos = $block.omos;
}
| ( ^(op=CLOSURE b=block[null,null])
| ^(op=POSITIVE_CLOSURE b=block[null,null])
)
{
    List<CodeBlockForAlt> alts = new ArrayList<CodeBlockForAlt>();
    SrcOp blk = $b.omos.get(0);
    CodeBlockForAlt alt = new CodeBlockForAlt(controller.delegate);
    alt.addOp(blk);
    alts.add(alt);
    SrcOp loop = controller.getEBNFBlock($op, alts); // "star it"
    hasLookaheadBlock |= loop instanceof PlusBlock || loop instanceof StarBlock;
    $omos = DefaultOutputModelFactory.list(loop);
}
| block[null, null] { $omos = $block.omos;}
;

blockSet[GrammarAST label, boolean invert] returns [List<SrcOp> omos]
: ^(SET atom[label,invert]+) { $omos = controller.set($SET, $label, invert);}
;

/*
setElement
: STRING_LITERAL

```

```

| TOKEN_REF
| ^(RANGE STRING_LITERAL STRING_LITERAL)
;
*/

// TODO: combine ROOT/BANG into one then just make new op ref'ing return value of atom/terminal...
// TODO: same for NOT
atom[GrammarAST label, boolean invert] returns [List<SrcOp> omos]
: ^(NOT a=atom[$label, true]) {$omos = $a.omos;}
| range[label] {$omos = $range.omos;}
| ^(DOT ID terminal[$label])
| ^(DOT ID ruleref[$label])
| ^(WILDCARD .) {$omos = controller.wildcard($WILDCARD, $label);}
| WILDCARD {$omos = controller.wildcard($WILDCARD, $label);}
| terminal[label] {$omos = $terminal.omos;}
| ruleref[label] {$omos = $ruleref.omos;}
| blockSet[$label, invert] {$omos = $blockSet.omos;}
;

ruleref[GrammarAST label] returns [List<SrcOp> omos]
: ^(RULE_REF ARG_ACTION? elementOptions?) {$omos = controller.ruleRef($RULE_REF, $label,
$ARG_ACTION);}
;

range[GrammarAST label] returns [List<SrcOp> omos]
: ^(RANGE a=STRING_LITERAL b=STRING_LITERAL)
;

terminal[GrammarAST label] returns [List<SrcOp> omos]
: ^(STRING_LITERAL .) {$omos = controller.stringRef($STRING_LITERAL, $label);}
| STRING_LITERAL {$omos = controller.stringRef($STRING_LITERAL, $label);}
| ^(TOKEN_REF ARG_ACTION .) {$omos = controller.tokenRef($TOKEN_REF, $label, $ARG_ACTION);}
| ^(TOKEN_REF .) {$omos = controller.tokenRef($TOKEN_REF, $label, null);}
| TOKEN_REF {$omos = controller.tokenRef($TOKEN_REF, $label, null);}
;

elementOptions
: ^(ELEMENT_OPTIONS elementOption+)
;

elementOption
: ID
| ^(ASSIGN ID ID)
| ^(ASSIGN ID STRING_LITERAL)
| ^(ASSIGN ID ACTION)
| ^(ASSIGN ID INT)
;

```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/SourceGenTriggers.g

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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/AttributeResolver.java

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/JavaScriptTarget.java

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/analysis/LeftRecursionDetector.java

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-

jar/org/antlr/v4/codegen/model/chunk/ArgRef.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/RuleRefAST.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/decl/TokenDecl.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/TokenPropertyRef\_int.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/SemPred.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/RuleElementAST.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ToolMessage.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/ThisRulePropertyRef\_parser.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/TokenPropertyRef\_index.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/SwiftTarget.java  
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\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/SrcOp.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/Rule.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/semantics/UseDefAnalyzer.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/decl/TokenListDecl.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/unicode/UnicodeDataTemplateController.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/ListenerDispatchMethod.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/SetNonLocalAttr.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/semantics/SemanticPipeline.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/gui/TreeView.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/CodeGeneratorExtension.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/CaptureNextToken.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/ThrowNoViableAlt.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ErrorSeverity.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/LeftRecursionCyclesMessage.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/DispatchMethod.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/Python3Target.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/LexerFile.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/LL1AltBlock.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/TokenPropertyRef.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/RulePropertyRef\_parser.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/dbg.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-

jar/org/antlr/v4/codegen/model/Recognizer.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/target/DartTarget.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/SetAST.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/LeftRecursiveRule.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/chunk/RetValRef.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/gui/TestRig.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/Action.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/DefaultOutputModelFactory.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/Sync.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/misc/CharSupport.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/decl/ContextRuleGetterDecl.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/OutputModelController.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/automata/ATNPrinter.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/LeftRecursiveRuleFunction.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/ListenerFile.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/StarBlockAST.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/misc/Graph.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/decl/TokenTypeDecl.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/semantics/AttributeChecks.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/ElementFrequenciesVisitor.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/decl/RuleContextListDecl.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/tool/ast/OptionalBlockAST.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/tool/GrammarSemanticsMessage.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/chunk/ActionChunk.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/ActionTranslator.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/chunk/TokenPropertyRef\_text.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/CodeGenerator.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/analysis/LeftRecursiveRuleAnalyzer.java  
\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/codegen/model/LL1PlusBlockSingleAlt.java

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/VisitorFile.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/PlusBlockAST.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/GrammarRootAST.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/GrammarASTAdaptor.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/gui/Trees.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/gui/TreeTextProvider.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/CppTarget.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/SetAttr.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/TerminalAST.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/misc/Utils.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/GoTarget.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/decl/CodeBlock.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/StarBlock.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/decl/ContextTokenGetterDecl.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/decl/AttributeDecl.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/RulePropertyRef\_start.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/automata/ParserATNFactory.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/Parser.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/chunk/TokenRef.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/misc/OrderedHashMap.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ANTLRMessage.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/target/PHPTarget.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/misc/FrequencySet.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/LexerGrammar.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/Grammar.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/BlockAST.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/GrammarASTErrorNode.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/LL1StarBlockSingleAlt.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/codegen/model/LL1OptionalBlock.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/ast/GrammarAST.java  
 \* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-

jar/org/antlr/v4/codegen/model/TestSetInline.java

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 */
```

```
tree grammar ATNBuilder;
```

```
options {
  language = Java;
  tokenVocab = ANTLRParser;
  ASTLabelType = GrammarAST;
  // filter = true;
}
```

```
// Include the copyright in this source and also the generated source
```

```
@header {
```

```
/*
```

```
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```

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\*/

```
package org.antlr.v4.parse;
import org.antlr.v4.tool.*;
import org.antlr.v4.tool.ast.*;
import org.antlr.v4.automata.ATNFactory;
}
```

```
@members {
    ATNFactory factory;
    public ATNBuilder(TreeNodeStream input, ATNFactory factory) {
        this(input);
        this.factory = factory;
    }
}
```

```
dummy : block[null] ; // avoid error about no start rule
```

```
ruleBlock[GrammarAST ebnfRoot] returns [ATNFactory.Handle p]
```

```
@init {
    List<ATNFactory.Handle> alts = new ArrayList<ATNFactory.Handle>();
    int alt = 1;
    factory.setCurrentOuterAlt(alt);
}
: ^(BLOCK
    (^ (OPTIONS .*))?)
    ( a=alternative
      {alts.add($a.p); factory.setCurrentOuterAlt(++alt);}
    )+
)
```

```

    {$p = factory.block((BlockAST)$BLOCK, ebnfRoot, alts);}
;

block[GrammarAST ebnfRoot] returns [ATNFactory.Handle p]
@init {List<ATNFactory.Handle> alts = new ArrayList<ATNFactory.Handle>();}
: ^(BLOCK (^OPTIONS .*)? (a=alternative {alts.add($a.p);})+
    {$p = factory.block((BlockAST)$BLOCK, ebnfRoot, alts);}
;

alternative returns [ATNFactory.Handle p]
@init {List<ATNFactory.Handle> els = new ArrayList<ATNFactory.Handle>();}
: ^(LEXER_ALT_ACTION a=alternative lexerCommands
    {$p = factory.lexerAltCommands($a.p,$lexerCommands.p);}
| ^(ALT elementOptions? EPSILON)    {$p = factory.epsilon($EPSILON);}
| ^(ALT elementOptions? (e=element {els.add($e.p);})+) {$p = factory.alt(els);}
;

lexerCommands returns [ATNFactory.Handle p]
@init {List<ATNFactory.Handle> cmds = new ArrayList<ATNFactory.Handle>();}
: (c=lexerCommand {if ($c.cmd != null) cmds.add($c.cmd);})+
    {
    $p = factory.alt(cmds);
    }
;

lexerCommand returns [ATNFactory.Handle cmd]
: ^(LEXER_ACTION_CALL ID lexerCommandExpr
    {$cmd = factory.lexerCallCommand($ID, $lexerCommandExpr.start);}
| ID
    {$cmd = factory.lexerCommand($ID);}
;

lexerCommandExpr
: ID
| INT
;

element returns [ATNFactory.Handle p]
: labeledElement    {$p = $labeledElement.p;}
| atom              {$p = $atom.p;}
| subrule           {$p = $subrule.p;}
| ACTION            {$p = factory.action((ActionAST)$ACTION);}
| SEMPRED           {$p = factory.sempred((PredAST)$SEMPRED);}
| ^(ACTION .)       {$p = factory.action((ActionAST)$ACTION);}
| ^(SEMPRED .)      {$p = factory.sempred((PredAST)$SEMPRED);}
| ^(NOT b=blockSet[true]) {$p = $b.p;}
| LEXER_CHAR_SET    {$p = factory.charSetLiteral($start);}
;

```

```

astOperand returns [ATNFactory.Handle p]
: atom    {$p = $atom.p;}
| ^(NOT blockSet[true]) {$p = $blockSet.p;}
;

```

```

labeledElement returns [ATNFactory.Handle p]
: ^(ASSIGN ID element)  {$p = factory.label($element.p);}
| ^(PLUS_ASSIGN ID element) {$p = factory.listLabel($element.p);}
;

```

```

subrule returns [ATNFactory.Handle p]
: ^(OPTIONAL block[$start]) {$p = $block.p;}
| ^(CLOSURE block[$start]) {$p = $block.p;}
| ^(POSITIVE_CLOSURE block[$start]) {$p = $block.p;}
| block[null]    {$p = $block.p;}
;

```

```

blockSet[boolean invert] returns [ATNFactory.Handle p]
@init {List<GrammarAST> alts = new ArrayList<GrammarAST>();}
: ^(SET (setElement {alts.add($setElement.start);})+) {$p = factory.set($start, alts, $invert);}
;

```

/\*\* Don't combine with atom otherwise it will build spurious ATN nodes \*/

```

setElement
: ^(STRING_LITERAL .)
| ^(TOKEN_REF .)
| STRING_LITERAL
| TOKEN_REF
| ^(RANGE a=STRING_LITERAL b=STRING_LITERAL)
| LEXER_CHAR_SET
;

```

```

atom returns [ATNFactory.Handle p]
: range    {$p = $range.p;}
| ^(DOT ID terminal) {$p = $terminal.p;}
| ^(DOT ID ruleref) {$p = $ruleref.p;}
| ^(WILDCARD .) {$p = factory.wildcard($start);}
| WILDCARD {$p = factory.wildcard($start);}
| blockSet[false] {$p = $blockSet.p;}
| terminal    {$p = $terminal.p;}
| ruleref    {$p = $ruleref.p;}
;

```

```

ruleref returns [ATNFactory.Handle p]
: ^(RULE_REF ARG_ACTION? ^(ELEMENT_OPTIONS .*)) {$p = factory.ruleRef($RULE_REF);}
| ^(RULE_REF ARG_ACTION?)    {$p = factory.ruleRef($RULE_REF);}
| RULE_REF    {$p = factory.ruleRef($RULE_REF);}

```

```
;
range returns [ATNFactory.Handle p]
: ^(RANGE a=STRING_LITERAL b=STRING_LITERAL) {$p = factory.range($a,$b);}
;
```

```
terminal returns [ATNFactory.Handle p]
: ^(STRING_LITERAL .) {$p = factory.stringLiteral((TerminalAST)$start);}
| STRING_LITERAL {$p = factory.stringLiteral((TerminalAST)$start);}
| ^(TOKEN_REF ARG_ACTION .) {$p = factory.tokenRef((TerminalAST)$start);}
| ^(TOKEN_REF .) {$p = factory.tokenRef((TerminalAST)$start);}
| TOKEN_REF {$p = factory.tokenRef((TerminalAST)$start);}
;
```

```
elementOptions
: ^(ELEMENT_OPTIONS elementOption*)
;
```

```
elementOption
: ID
| ^(ASSIGN ID ID)
| ^(ASSIGN ID STRING_LITERAL)
| ^(ASSIGN ID ACTION)
| ^(ASSIGN ID INT)
;
```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/ATNBuilder.g

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 \*/

```
atn(startState, states, edges, rankdir, decisionRanks, useBox) ::= <<
```

```
digraph ATN {
rankdir=LR;
<decisionRanks; separator="\n">
<states; separator="\n">
<edges; separator="\n">
}
>>
```

```
dfa(name, startState, states, edges, rankdir, decisionRanks, useBox) ::= <<
```

```
digraph <name> {
<if(rankdir)>rankdir=<rankdir>;<endif>
<decisionRanks; separator="\n">
<states; separator="\n">
<edges; separator="\n">
}
>>
```

```
decision-rank(states) ::= <<
```

```
{rank=same; rankdir=TB; <states:{s | s<s>}; separator=" "; ">}
>>
```

```
edge(src,target,label,arrowhead,transitionIndex) ::= <<
```

```
<src><if(transitionIndex)>p<transitionIndex><endif> -> <target> [fontsize=11, fontname="Courier", arrowsize=.7,
label = "<label>"<if(arrowhead)>, arrowhead = <arrowhead><endif>];
>>
```

```
action-edge(src,target,label,arrowhead,transitionIndex) ::= <<
```

```
<src><if(transitionIndex)>p<transitionIndex><endif> -> <target> [fontsize=11, fontname="Courier", arrowsize=.7,
label = "<label>"<if(arrowhead)>, arrowhead = <arrowhead><endif>];
>>
```

```
epsilon-edge(src,label,target,arrowhead,transitionIndex,loopback=false) ::= <<
```

```
<src><if(transitionIndex)>p<transitionIndex><endif> -> <target> [fontname="Times-Italic",
label="&epsilon;"<if(loopback)>, style="dashed"<endif>];
>>
```

```

state(state, label, name, transitions) ::= <%
<name>[fontsize=11,
  label="
    <! rest(transition) tests for decision states: these nodes have a non-empty set of transitions after the first one. !>
    <if(rest(transitions))>
      {
        <! Label on the left side of the record node. !>
        <label>
        |
        <! Named ports in order on right side of record node, no display text. !>
        {<transitions:{t|\<p<i0>>} ; separator="|">}
      }
    <else>
      <label>
    <endif>
    "
  <if(rest(transitions))>
    , shape=record, fixedsize=false
  <else>
    , shape=circle, fixedsize=true, width=.55
  <endif>
  , peripheries=1];
%>

```

```

stopstate(name,label,actionIndex,useBox) ::= <<
<name>[fontsize=11, label="<label><if(actionIndex)>,\naction:<actionIndex><endif>",
<if(useBox)>shape=polygon,sides=4,peripheries=2,fixedsize=false<else>shape=doublecircle, fixedsize=true,
width=.6<endif>];
>>

```

Found in path(s):

```

* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/dot/graphs.stg

```

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```

/*

```

```

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```

```

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```

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```

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```

```

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```

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* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*/

```

```

/** templates used to generate make-compatible dependencies */

```

```

/** Generate "f : x, y, z" dependencies for input
* dependencies and generated files. in and out
* are File objects. For example, you can say
* <f.canonicalPath>
*/
dependencies(grammarFileName,in,out) ::= <<
<if(in)><grammarFileName>: <in; separator=", "><endif>
<out:{f | <f> : <grammarFileName>; separator="\n"}>
>>

```

Found in path(s):

```

* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/depend.stg
No license file was found, but licenses were detected in source scan.

```

```

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- \*/

```
javaTypeInitMap ::= [
  "int": "0",
  "long": "0",
  "float": "0.0f",
  "double": "0.0",
  "boolean": "false",
  "byte": "0",
  "short": "0",
  "char": "0",
  default: "null" // anything other than a primitive type is an object
]
```

```
// args must be <object-model-object>, <fields-resulting-in-STs>
```

```
ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
package <file.genPackage>;
<endif>
<namedActions.header>
import org.antlr.v4.runtime.atn.*;
import org.antlr.v4.runtime.dfa.DFA;
import org.antlr.v4.runtime.*;
import org.antlr.v4.runtime.misc.*;
import org.antlr.v4.runtime.tree.*;
import java.util.List;
import java.util.Iterator;
import java.util.ArrayList;

<parser>
>>
```

```
ListenerFile(file, header, namedActions) ::= <<
```

```

<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
package <file.genPackage>;
<endif>
<header>
import org.antlr.v4.runtime.tree.ParseTreeListener;

/**
 * This interface defines a complete listener for a parse tree produced by
 * { @link <file.parserName> }.
 */
public interface <file.grammarName>Listener extends ParseTreeListener {
    <file.listenerNames: {Iname |
/**
<if(file.listenerLabelRuleNames.(Iname))>
 * Enter a parse tree produced by the { @code <Iname>\}
 * labeled alternative in { @link <file.parserName>#<file.listenerLabelRuleNames.(Iname)>\}.
<else>
 * Enter a parse tree produced by { @link <file.parserName>#<Iname>\}.
<endif>
 * @param ctx the parse tree
 */
void enter<Iname; format="cap">(<file.parserName>.<Iname; format="cap">Context ctx);
/**
<if(file.listenerLabelRuleNames.(Iname))>
 * Exit a parse tree produced by the { @code <Iname>\}
 * labeled alternative in { @link <file.parserName>#<file.listenerLabelRuleNames.(Iname)>\}.
<else>
 * Exit a parse tree produced by { @link <file.parserName>#<Iname>\}.
<endif>
 * @param ctx the parse tree
 */
void exit<Iname; format="cap">(<file.parserName>.<Iname; format="cap">Context ctx);}; separator="\n">
}
>>

```

```

BaseListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
package <file.genPackage>;
<endif>
<header>

import org.antlr.v4.runtime.ParserRuleContext;
import org.antlr.v4.runtime.tree.ErrorNode;
import org.antlr.v4.runtime.tree.TerminalNode;

/**

```

```

* This class provides an empty implementation of { @link <file.grammarName>Listener},
* which can be extended to create a listener which only needs to handle a subset
* of the available methods.
*/
public class <file.grammarName>BaseListener implements <file.grammarName>Listener {
    <file.listenerNames: {lname |
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void enter<lname; format="cap">(<file.parserName>.<lname; format="cap">Context ctx) { \}
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void exit<lname; format="cap">(<file.parserName>.<lname; format="cap">Context ctx) { \};
    separator="\n">

/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void enterEveryRule(ParserRuleContext ctx) { }
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void exitEveryRule(ParserRuleContext ctx) { }
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void visitTerminal(TerminalNode node) { }
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation does nothing.\</p>
 */
    @Override public void visitErrorNode(ErrorNode node) { }
}
>>

```

```

VisitorFile(file, header, namedActions) ::= <<

```

```

<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
package <file.genPackage>;
<endif>
<header>
import org.antlr.v4.runtime.tree.ParseTreeVisitor;

/**
 * This interface defines a complete generic visitor for a parse tree produced
 * by { @link <file.parserName> }.
 *
 * @param \<T> The return type of the visit operation. Use { @link Void } for
 * operations with no return type.
 */
public interface <file.grammarName>Visitor\<T> extends ParseTreeVisitor\<T> {
    <file.visitorNames:{ lname |
/**
<if(file.visitorLabelRuleNames.(lname))>
 * Visit a parse tree produced by the { @code <lname>}
 * labeled alternative in { @link <file.parserName>#<file.visitorLabelRuleNames.(lname)> }.
<else>
 * Visit a parse tree produced by { @link <file.parserName>#<lname> }.
<endif>
 * @param ctx the parse tree
 * @return the visitor result
 */
    T visit<lname; format="cap">(<file.parserName>.<lname; format="cap">Context ctx);}; separator="\n">
    }
>>

```

```

BaseVisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
package <file.genPackage>;
<endif>
<header>
import org.antlr.v4.runtime.tree.AbstractParseTreeVisitor;

/**
 * This class provides an empty implementation of { @link <file.grammarName>Visitor },
 * which can be extended to create a visitor which only needs to handle a subset
 * of the available methods.
 *
 * @param \<T> The return type of the visit operation. Use { @link Void } for
 * operations with no return type.
 */
public class <file.grammarName>BaseVisitor\<T> extends AbstractParseTreeVisitor\<T> implements
<file.grammarName>Visitor\<T> {

```

```

<file.visitorNames:{lname |
/**
 * { @inheritDoc\}
 *
 * \<p>The default implementation returns the result of calling
 * { @link #visitChildren\} on { @code ctx\}.\</p>
 */
@Override public T visit<lname; format="cap">(<file.parserName>.<lname; format="cap">Context ctx) { return
visitChildren(ctx); \} }; separator="\n">
}
>>

fileHeader(grammarFileName, ANTLRVersion) ::= <<
// Generated from <grammarFileName; format="java-escape"> by ANTLR <ANTLRVersion>
>>

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
@SuppressWarnings({"all", "warnings", "unchecked", "unused", "cast"})
public class <parser.name> extends <superClass; null="Parser"> {
static { RuntimeMetaData.checkVersion("<file.ANTLRVersion>", RuntimeMetaData.VERSION); }

protected static final DFA[] _decisionToDFA;
protected static final PredictionContextCache _sharedContextCache =
new PredictionContextCache();
<if(parser.tokens)>
public static final int
<parser.tokens:{k | <k>=<parser.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>
<if(parser.rules)>
public static final int
<parser.rules:{r | RULE_<r.name> = <r.index>}; separator=", ", wrap, anchor>;
<endif>
private static String[] makeRuleNames() {
return new String[] {
<parser.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
};
}
public static final String[] ruleNames = makeRuleNames();

<vocabulary(parser.literalNames, parser.symbolicNames)>

@Override
public String getGrammarFileName() { return "<parser.grammarFileName; format="java-escape">"; }

```

```

@Override
public String[] getRuleNames() { return ruleNames; }

@Override
public String getSerializedATN() { return _serializedATN; }

@Override
public ATN getATN() { return _ATN; }

<namedActions.members>
<parser:(ctor)()>
<funcs; separator="\n">

<if(sempredFuncs)>
public boolean sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
    switch (ruleIndex) {
        <parser.sempredFuncs.values:{f}
    case <f.ruleIndex>:
        return <f.name>_sempred((<f.ctxType>)_localctx, predIndex);}; separator="\n">
    }
    return true;
    }
    <sempredFuncs.values; separator="\n">
<endif>

<atn>
}
>>

vocabulary(literalNames, symbolicNames) ::= <<
private static String[] makeLiteralNames() {
    return new String[] {
        <literalNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
    };
}
private static final String[] _LITERAL_NAMES = makeLiteralNames();
private static String[] makeSymbolicNames() {
    return new String[] {
        <symbolicNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
    };
}
private static final String[] _SYMBOLIC_NAMES = makeSymbolicNames();
public static final Vocabulary VOCABULARY = new VocabularyImpl(_LITERAL_NAMES,
    _SYMBOLIC_NAMES);

/**
 * @deprecated Use {@link #VOCABULARY} instead.
 */

```

```

@Deprecated
public static final String[] tokenNames;
static {
    tokenNames = new String[_SYMBOLIC_NAMES.length];
    for (int i = 0; i < tokenNames.length; i++) {
        tokenNames[i] = VOCABULARY.getLiteralName(i);
        if (tokenNames[i] == null) {
            tokenNames[i] = VOCABULARY.getSymbolicName(i);
        }

        if (tokenNames[i] == null) {
            tokenNames[i] = "<INVALID>";
        }
    }
}

@Override
@Deprecated
public String[] getTokenNames() {
    return tokenNames;
}

@Override

public Vocabulary getVocabulary() {
    return VOCABULARY;
}
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
@Override
public void action(RuleContext _localctx, int ruleIndex, int actionIndex) {
    switch (ruleIndex) {
        <recog.actionFuncs.values: {f}
    case <f.ruleIndex>:
        <f.name>_action((<f.ctxType>)_localctx, actionIndex);
        break;}; separator="\n">
    }
}
<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>
@Override
public boolean sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
    switch (ruleIndex) {
        <recog.sempredFuncs.values: {f}
    case <f.ruleIndex>:

```

```

return <f.name>_sempred((<f.ctxType>)_localctx, predIndex);}; separator="\n">
}
return true;
}
<sempredFuncs.values; separator="\n">
<endif>
>>

```

```

parser_ctor(p) ::= <<
public <p.name>(TokenStream input) {
    super(input);
    _interp = new ParserATNSimulator(this,_ATN,_decisionToDFA,_sharedContextCache);
}
>>

```

```

/* This generates a private method since the actionIndex is generated, making an
* overriding implementation impossible to maintain.
*/

```

```

RuleActionFunction(r, actions) ::= <<
private void <r.name>_action(<r.ctxType> _localctx, int actionIndex) {
    switch (actionIndex) {
    <actions:{index|
case <index>:
    <actions.(index)>
break;}; separator="\n">
    }
}
>>

```

```

/* This generates a private method since the predIndex is generated, making an
* overriding implementation impossible to maintain.
*/

```

```

RuleSempredFunction(r, actions) ::= <<
private boolean <r.name>_sempred(<r.ctxType> _localctx, int predIndex) {
    switch (predIndex) {
    <actions:{index|
case <index>:
    return <actions.(index)>;}; separator="\n">
    }
    return true;
}
>>

```

```

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<

```

```

<ruleCtx>
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">

```

```

<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>public final <endif><currentRule.ctxType>
<currentRule.name><(<args; separator=",">) throws RecognitionException {
  <currentRule.ctxType> _localctx = new <currentRule.ctxType>(_ctx, getState()<currentRule.args:{a | ,
<a.name>}>);
  enterRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>);
  <namedActions.init>
  <locals; separator="\n">
  try {
  <if(currentRule.hasLookaheadBlock)>
    int _alt;
  <endif>
  <code>
  <postamble; separator="\n">
  <namedActions.after>
  }
  <if(exceptions)>
  <exceptions; separator="\n">
  <else>
  catch (RecognitionException re) {
    _localctx.exception = re;
    _errHandler.reportError(this, re);
    _errHandler.recover(this, re);
  }
  <endif>
  finally {
  <finallyAction>
  exitRule();
  }
  return _localctx;
  }
  >>

```

```

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,
  namedActions,finallyAction,postamble) ::=
<<

```

```

<ruleCtx>
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">

```

```

<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>public final <endif><currentRule.ctxType>
<currentRule.name><(<args; separator=",">) throws RecognitionException {
  return <currentRule.name>(0<currentRule.args:{a | , <a>}>);
  }

```

```

private <currentRule.ctxType> <currentRule.name>(int _p<args:{a | , <a>}>) throws RecognitionException {
  ParserRuleContext _parentctx = _ctx;
  int _parentState = getState();

```

```

<currentRule.ctxType> _localctx = new <currentRule.ctxType>(_ctx, _parentState<currentRule.args:{a | ,
<a.name>}>);
<currentRule.ctxType> _prevctx = _localctx;
int _startState = <currentRule.startState>;
enterRecursionRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>, _p);
<namedActions.init>
<locals; separator="\n">
try {
<if(currentRule.hasLookaheadBlock)>
int _alt;
<endif>
<code>
<postamble; separator="\n">
<namedActions.after>
}
catch (RecognitionException re) {
_localctx.exception = re;
_errHandler.reportError(this, re);
_errHandler.recover(this, re);
}
finally {
<finallyAction>
unrollRecursionContexts(_parentctx);
}
return _localctx;
}
>>

```

```

CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>_localctx = new <currentOuterMostAltCodeBlock.altLabel;
format="cap">Context(_localctx);<endif>
enterOuterAlt(_localctx, <currentOuterMostAltCodeBlock.alt.altNum>);
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

```

```

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
{
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
}
>>

```

```

LL1AltBlock(choice, preamble, alts, error) ::= <<
setState(<choice.stateNumber>);
_errHandler.sync(this);
<if(choice.label)><labelref(choice.label)> = _input.LT(1);<endif>
<preamble; separator="\n">

```

```

switch (_input.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
<error>
}
>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
setState(<choice.stateNumber>);
_errHandler.sync(this);
switch (_input.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
break;
}
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
setState(<choice.stateNumber>);
_errHandler.sync(this);
<preamble; separator="\n">
if (<expr>) {
<alts; separator="\n">
}
<!else if ( !(<followExpr> ) <error!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
setState(<choice.stateNumber>);
_errHandler.sync(this);
<preamble; separator="\n">
while (<loopExpr>) {
<alts; separator="\n">
setState(<choice.loopBackStateNumber>);
_errHandler.sync(this);
<iteration>
}
>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
setState(<choice.blockStartStateNumber>); <! alt block decision !>
_errHandler.sync(this);
<preamble; separator="\n">
do {

```

```

<alts; separator="\n">
  setState(<choice.stateNumber>); <! loopback/exit decision !>
  _errHandler.sync(this);
  <iteration>
} while ( <loopExpr> );
>>

// LL(*) stuff

AltBlock(choice, preamble, alts, error) ::= <<
  setState(<choice.stateNumber>);
  _errHandler.sync(this);
  <if(choice.label)><labelref(choice.label)> = _input.LT(1);<endif>
  <preamble; separator="\n">
  switch ( getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx) ) {
  <alts:{ alt |
  case <i>:
    <alt>
    break;}; separator="\n">
  }
  >>

OptionalBlock(choice, alts, error) ::= <<
  setState(<choice.stateNumber>);
  _errHandler.sync(this);
  switch ( getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx) ) {
  <alts:{ alt |
  case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
    break;}; separator="\n">
  }
  >>

StarBlock(choice, alts, sync, iteration) ::= <<
  setState(<choice.stateNumber>);
  _errHandler.sync(this);
  _alt = getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx);
  while ( _alt!=<choice.exitAlt> && _alt!=org.antlr.v4.runtime.atn.ATN.INVALID_ALT_NUMBER ) {
  if ( _alt==1<if(!choice.ast.greedy)>+1<endif> ) {
    <iteration>
    <alts> <! should only be one !>
  }
  setState(<choice.loopBackStateNumber>);
  _errHandler.sync(this);
  _alt = getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx);
  }
  >>

```

```

PlusBlock(choice, alts, error) ::= <<
setState(<choice.blockStartStateNumber>); <! alt block decision !>
_errHandler.sync(this);
_alt = 1<if(!choice.ast.greedy)>+1<endif>;
do {
switch (_alt) {
<alts:{alt|
case <i><if(!choice.ast.greedy)>+1<endif>:
<alt>
break;}; separator="\n">
default:
<error>
}
setState(<choice.loopBackStateNumber>); <! loopback/exit decision !>
_errHandler.sync(this);
_alt = getInterpreter().adaptivePredict(_input,<choice.decision>,_ctx);
} while ( _alt!=<choice.exitAlt> && _alt!=org.antlr.v4.runtime.atn.ATN.INVALID_ALT_NUMBER );
>>

```

```

Sync(s) ::= "sync(<s.expecting.name>);"

```

```

ThrowNoViableAlt(t) ::= "throw new NoViableAltException(this);"

```

```

TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">
>>

```

```

// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>

```

```

// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({<offsetShift(s.varName, bits.shift)>})> && ((1L \<< <offsetShift(s.varName, bits.shift)>) &
(<bits.ttypes:{ ttype | (1L \<< <offsetShift(ttype, bits.shift)>)}; separator=" | ">)) != 0)
%>

```

```

isZero ::= [
"0":true,
default:false
]

```

```

offsetShift(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
%>

```

```

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ ttype | <s.varName>===<ttype>}; separator=" || ">
%>

cases(ttypes) ::= <<
<ttypes:{ t | case <t>:}; separator="\n">
>>

InvokeRule(r, argExprsChunks) ::= <<
setState(<r.stateNumber>);
<if(r.labels)><r.labels:{l | <labelref(l)> =
}><endif><r.name>(<if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)>,<endif><endif><argExprsChunks>
);
>>

MatchToken(m) ::= <<
setState(<m.stateNumber>);
<if(m.labels)><m.labels:{l | <labelref(l)> = }><endif>match(<m.name>);
>>

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

CommonSetStuff(m, expr, capture, invert) ::= <<
setState(<m.stateNumber>);
<if(m.labels)><m.labels:{l | <labelref(l)> = }>_input.LT(1);<endif>
<capture>
if ( <if(invert)><m.varName> \<= 0 || <else>!<endif>(<expr> ) ) {
  <if(m.labels)><m.labels:{l | <labelref(l)> = (Token)}><endif>_errHandler.recoverInline(this);
}
else {
  if ( _input.LA(1)==Token.EOF ) matchedEOF = true;
  _errHandler.reportMatch(this);
  consume();
}
>>

Wildcard(w) ::= <<
setState(<w.stateNumber>);
<if(w.labels)><w.labels:{l | <labelref(l)> = }><endif>matchWildcard();
>>

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

```

```

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
setState(<p.stateNumber>);
if (!(<chunks>)) throw new FailedPredicateException(this, <p.predicate><if(failChunks)>,
<failChunks><elseif(p.msg)>, <p.msg><endif>);
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
    <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "skip();"
LexerMoreCommand() ::= "more();"
LexerPopModeCommand() ::= "popMode();"

LexerTypeCommand(arg, grammar) ::= "_type = <arg>";
LexerChannelCommand(arg, grammar) ::= "_channel = <arg>";
LexerModeCommand(arg, grammar) ::= "_mode = <arg>";
LexerPushModeCommand(arg, grammar) ::= "pushMode(<arg>);"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "_localctx.<a.name>"
LocalRef(a) ::= "_localctx.<a.name>"
RetValRef(a) ::= "_localctx.<a.name>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<a.name>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<t.name>"
LabelRef(t) ::= "<ctx(t)>.<t.name>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(t.name)>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<s.name> = <rhsChunks>";

TokenLabelType() ::= "<file.TokenLabelType; null={Token}>"
InputSymbolType() ::= "<file.InputSymbolType; null={Token}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getText():null)"
TokenPropertyRef_type(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getType():0)"
TokenPropertyRef_line(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getLine():0)"
TokenPropertyRef_pos(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getCharPositionInLine():0)"
TokenPropertyRef_channel(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getChannel():0)"
TokenPropertyRef_index(t) ::= "<ctx(t)>.<t.label>!=null?<ctx(t)>.<t.label>.getTokenIndex():0)"
TokenPropertyRef_int(t) ::= "<ctx(t)>.<t.label>!=null?Integer.valueOf(<ctx(t)>.<t.label>.getText():0)"

```

```

RulePropertyRef_start(r) ::= "<ctx(r)>.<r.label>!=null?(<ctx(r)>.<r.label>.start):null)"
RulePropertyRef_stop(r) ::= "<ctx(r)>.<r.label>!=null?(<ctx(r)>.<r.label>.stop):null)"
RulePropertyRef_text(r) ::=
"<ctx(r)>.<r.label>!=null?_input.getText(<ctx(r)>.<r.label>.start,<ctx(r)>.<r.label>.stop):null)"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "this"

ThisRulePropertyRef_start(r) ::= "_localctx.start"
ThisRulePropertyRef_stop(r) ::= "_localctx.stop"
ThisRulePropertyRef_text(r) ::= "_input.getText(_localctx.start, _input.LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "_localctx"
ThisRulePropertyRef_parser(r) ::= "this"

NonLocalAttrRef(s) ::= "(<s.ruleName; format=\"cap\">Context)getInvokingContext(<s.ruleIndex>).<s.name>"
SetNonLocalAttr(s, rhsChunks) ::=
"(<s.ruleName; format=\"cap\">Context)getInvokingContext(<s.ruleIndex>).<s.name> = <rhsChunks>;"

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.add(<labelref(a.label)>);"

TokenDecl(t) ::= "<TokenLabelType() <t.name>"
TokenTypeDecl(t) ::= "int <t.name>;"
TokenListDecl(t) ::= "List<Token> <t.name> = new ArrayList<Token>()"
RuleContextDecl(r) ::= "<r.ctxName> <r.name>"
RuleContextListDecl(rdecl) ::= "List<<rdecl.ctxName>> <rdecl.name> = new ArrayList<<rdecl.ctxName>>()"

ContextTokenGetterDecl(t) ::=
"public TerminalNode <t.name>() { return getToken(<parser.name>.<t.name>, 0); }"
ContextTokenListGetterDecl(t) ::=
"public List<TerminalNode> <t.name>() { return getTokens(<parser.name>.<t.name>); }"
ContextTokenListIndexedGetterDecl(t) ::= <<
public TerminalNode <t.name>(int i) {
return getToken(<parser.name>.<t.name>, i);
}
>>
ContextRuleGetterDecl(r) ::= <<
public <r.ctxName> <r.name>() {
return getRuleContext(<r.ctxName>.class,0);
}
>>
ContextRuleListGetterDecl(r) ::= <<
public List<<r.ctxName>> <r.name>() {
return getRuleContexts(<r.ctxName>.class);
}
>>
ContextRuleListIndexedGetterDecl(r) ::= <<
public <r.ctxName> <r.name>(int i) {
return getRuleContext(<r.ctxName>.class,i);
}

```

>>

```
LexerRuleContext() ::= "RuleContext"
```

```
/** The rule context name is the rule followed by a suffix; e.g.,  
 * r becomes rContext.  
 */
```

```
RuleContextNameSuffix() ::= "Context"
```

```
ImplicitTokenLabel(tokenName) ::= "<tokenName>"
```

```
ImplicitRuleLabel(ruleName) ::= "<ruleName>"
```

```
ImplicitSetLabel(id) ::= "_tset<id>"
```

```
ListLabelName(label) ::= "<label>"
```

```
CaptureNextToken(d) ::= "<d.varName> = _input.LT(1);"
```

```
CaptureNextTokenType(d) ::= "<d.varName> = _input.LA(1);"
```

```
StructDecl(struct,ctorAttrs,attrs, getters,dispatchMethods,interfaces,extensionMembers)
```

```
::= <<
```

```
public static class <struct.name> extends
```

```
<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif><if(interfaces)> implements
```

```
<interfaces; separator=", "><endif> {
```

```
<attrs:{ a | public <a>;}; separator="\n">
```

```
<getters:{ g | <g>;}; separator="\n">
```

```
<if(ctorAttrs)>public <struct.name>(ParserRuleContext parent, int invokingState) { super(parent, invokingState);
```

```
}<endif>
```

```
public <struct.name>(ParserRuleContext parent, int invokingState<ctorAttrs:{ a | , <a>>}) {
```

```
super(parent, invokingState);
```

```
<struct.ctorAttrs:{ a | this.<a.name> = <a.name>;}; separator="\n">
```

```
}
```

```
@Override public int getRuleIndex() { return RULE_<struct.derivedFromName>; }
```

```
<if(struct.provideCopyFrom)><! don't need copy unless we have subclasses !>
```

```
public <struct.name>() { }
```

```
public void copyFrom(<struct.name> ctx) {
```

```
super.copyFrom(ctx);
```

```
<struct.attrs:{ a | this.<a.name> = ctx.<a.name>;}; separator="\n">
```

```
}
```

```
<endif>
```

```
<dispatchMethods; separator="\n">
```

```
<extensionMembers; separator="\n">
```

```
}
```

```
>>
```

```
AltLabelStructDecl(struct,attrs, getters,dispatchMethods) ::= <<
```

```
public static class <struct.name> extends <currentRule.name; format="cap">Context {
```

```
<attrs:{ a | public <a>;}; separator="\n">
```

```
<getters:{ g | <g>;}; separator="\n">
```

```
public <struct.name>(<currentRule.name; format="cap">Context ctx) { copyFrom(ctx); }
```

```

<dispatchMethods; separator="\n">
}
>>

ListenerDispatchMethod(method) ::= <<
@Override
public void <if(method.isEnter)>enter<else>exit<endif>Rule(ParseTreeListener listener) {
    if ( listener instanceof <parser.grammarName>Listener )
        ((<parser.grammarName>Listener)listener).<if(method.isEnter)>enter<else>exit<endif><struct.derivedFromName;
        format="cap">(this);
    }
}
>>

VisitorDispatchMethod(method) ::= <<
@Override
public <T> T accept(ParseTreeVisitor<? extends T> visitor) {
    if ( visitor instanceof <parser.grammarName>Visitor ) return ((<parser.grammarName>Visitor<? extends
    T>)visitor).visit<struct.derivedFromName; format="cap">(this);
    else return visitor.visitChildren(this);
    }
}
>>

AttributeDecl(d) ::= "<d.type> <d.name><if(d.initValue)> = <d.initValue><endif>"

/** If we don't know location of label def x, use this template */
labelref(x) ::= "<if(!x.isLocal)>((<x.ctx.name>)_localctx).<endif><x.name>"

/** For any action chunk, what is correctly-typed context struct ptr? */
ctx(actionChunk) ::= "(<actionChunk.ctx.name>)_localctx"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "precpred(_ctx, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name>=<src>.<name>";
recRuleSetStopToken() ::= "_ctx.stop = _input.LT(-1);"

recRuleAltStartAction(ruleName, ctxName, label, isListLabel) ::= <<
    _localctx = new <ctxName>Context(_parentctx, _parentState);
    <if(label)>
    <if(isListLabel)>
        _localctx.<label>.add(_prevctx);
    <else>
        _localctx.<label> = _prevctx;
    <endif>
    <endif>
    <if(label)>_localctx.<label> = _prevctx;<endif>
    pushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
}
>>

```

```

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
  _localctx = new <currentAltLabel; format="cap">Context(new <ruleName; format="cap">Context(_parentctx,
  _parentState));
  <if(label)>
  <if(isListLabel)>
  ((<currentAltLabel; format="cap">Context)_localctx).<label>.add(_prevctx);
  <else>
  ((<currentAltLabel; format="cap">Context)_localctx).<label> = _prevctx;
  <endif>
  <endif>
  pushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
  >>

```

```

recRuleReplaceContext(ctxName) ::= <<
  _localctx = new <ctxName>Context(_localctx);
  _ctx = _localctx;
  _prevctx = _localctx;
  >>

```

```

recRuleSetPrevCtx() ::= <<
  if ( _parseListeners!=null ) triggerExitRuleEvent();
  _prevctx = _localctx;
  >>

```

```

LexerFile(lexerFile, lexer, namedActions) ::= <<
  <fileHeader(lexerFile.grammarFileName, lexerFile.ANTLRVersion)>
  <if(lexerFile.genPackage)>
  package <lexerFile.genPackage>;
  <endif>
  <namedActions.header>
  import org.antlr.v4.runtime.Lexer;
  import org.antlr.v4.runtime.CharStream;
  import org.antlr.v4.runtime.Token;
  import org.antlr.v4.runtime.TokenStream;
  import org.antlr.v4.runtime.*;
  import org.antlr.v4.runtime.atn.*;
  import org.antlr.v4.runtime.dfa.DFA;
  import org.antlr.v4.runtime.misc.*;

  <lexer>
  >>

```

```

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
  @SuppressWarnings({"all", "warnings", "unchecked", "unused", "cast"})
  public class <lexer.name> extends <superClass; null="Lexer"> {
    static { RuntimeMetaData.checkVersion("<lexerFile.ANTLRVersion>", RuntimeMetaData.VERSION); }

```

```

protected static final DFA[] _decisionToDFA;
protected static final PredictionContextCache _sharedContextCache =
    new PredictionContextCache();
<if(lexer.tokens)>
public static final int
    <lexer.tokens:{k | <k>=<lexer.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>
<if(lexer.channels)>
public static final int
    <lexer.channels:{c | <c>=<lexer.channels.(c)>}; separator=", ", wrap, anchor>;
<endif>
<if(rest(lexer.modes))>
public static final int
    <rest(lexer.modes):{m | <m>=<i>}; separator=", ", wrap, anchor>;
<endif>
public static String[] channelNames = {
    "DEFAULT_TOKEN_CHANNEL", "HIDDEN"<if (lexer.channels)>, <lexer.channels:{c| "<c>"}; separator=", ",
wrap, anchor><endif>
};

public static String[] modeNames = {
    <lexer.modes:{m| "<m>"}; separator=", ", wrap, anchor>
};

private static String[] makeRuleNames() {
    return new String[] {
        <lexer.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
    };
}
public static final String[] ruleNames = makeRuleNames();

<vocabulary(lexer.literalNames, lexer.symbolicNames)>

<namedActions.members>

public <lexer.name>(CharStream input) {
    super(input);
    _interp = new LexerATNSimulator(this, _ATN, _decisionToDFA, _sharedContextCache);
}

@Override
public String getGrammarFileName() { return "<lexer.grammarFileName>"; }

@Override
public String[] getRuleNames() { return ruleNames; }

@Override
public String getSerializedATN() { return _serializedATN; }

```

```

@Override
public String[] getChannelNames() { return channelNames; }

@Override
public String[] getModeNames() { return modeNames; }

@Override
public ATN getATN() { return _ATN; }

<dumpActions(lexer, "", actionFuncs, sempredFuncs)>
<atn>
}
>>

SerializedATN(model) ::= <<
<if(rest(model.segments))>
<! requires segmented representation !>
private static final int _serializedATNSegments = <length(model.segments)>;
<model.segments:{segment|private static final String _serializedATNSegment<i0> =
"<segment; wrap={ "+<\n><\t>" }>"; separator="\n">
public static final String _serializedATN = Utils.join(
new String[] {
<model.segments:{segment | _serializedATNSegment<i0>}; separator=",\n">
},
""
);
<else>
<! only one segment, can be inlined !>
public static final String _serializedATN =
"<model.serialized; wrap={ "+<\n><\t>" }>";
<endif>
public static final ATN _ATN =
new ATNDeserializer().deserialize(_serializedATN.toCharArray());
static {
_decisionToDFA = new DFA[_ATN.getNumberOfDecisions()];
for (int i = 0; i < _ATN.getNumberOfDecisions(); i++) {
_decisionToDFA[i] = new DFA(_ATN.getDecisionState(i), i);
}
<! org antlr.v4.tool.DOTGenerator dot = new org antlr.v4.tool.DOTGenerator(null);!>
<! System.out.println(dot.getDOT(_ATN.decisionToState.get(0), ruleNames, false));!>
<! System.out.println(dot.getDOT(_ATN.ruleToStartState[2], ruleNames, false));!>
}
>>

/** Using a type to init value map, try to init a type; if not in table
* must be an object, default value is "null".
*/

```

```
initValue(typeName) ::= <<  
<javaTypeInitMap.(typeName)>  
>>
```

```
codeFileExtension() ::= ".java"
```

Found in path(s):

```
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-  
jar/org/antlr/v4/tool/templates/codegen/Java/Java.stg
```

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```
/*
```

```
[The "BSD licence"]
```

```
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```

```
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```

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```
*/
```

```
/*
```

This file contains the actual layout of the messages emitted by ANTLR.

The text itself is coming out of the languages/\*stg files, according to the chosen locale.

This file contains the format that mimicks GCC output.

```
*/
```

```
location(file, line, column) ::= "<file>:<line>:<column>:"
```

```
message(id, text) ::= "<text> [error <id>]"
```

report(location, message, type) ::= "<location> <type>: <message>"

wantsSingleLineMessage() ::= "true"

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/tool/templates/messages/formats/gnu.stg

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\*/

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/ANTLRLexer.java

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~ Copyright (c) 2012-2017 The ANTLR Project. All rights reserved.

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/META-INF/maven/org.antlr/antlr4/pom.xml

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```

/*
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 *
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 * (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
 * THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
 */

```

```

// args must be <object-model-object>, <fields-resulting-in-STs>

```

```

ParserFile(file, parser, namedActions, contextSuperClass) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<namedActions.header>
using System;
using System.IO;
using System.Text;
using System.Diagnostics;
using System.Collections.Generic;
using Antlr4.Runtime;
using Antlr4.Runtime.Atn;
using Antlr4.Runtime.Misc;
using Antlr4.Runtime.Tree;
using DFA = Antlr4.Runtime.Dfa.DFA;

```

```

<parser>
<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

```

```

ListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<header>
using Antlr4.Runtime.Misc;
using IParseTreeListener = Antlr4.Runtime.Tree.IParseTreeListener;
using IToken = Antlr4.Runtime.IToken;

/// \<summary>
/// This interface defines a complete listener for a parse tree produced by
/// \<see cref="<csIdentifier.(file.parserName)>"/>.
/// \</summary>
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.CLSCompliant(false)]
public interface I<file.grammarName>Listener : IParseTreeListener {
<file.listenerNames:{Iname |
/// \<summary>
<if(file.listenerLabelRuleNames.(Iname))>
/// Enter a parse tree produced by the \<c><Iname>\</c>
/// labeled alternative in \<see cref="<file.parserName>.<file.listenerLabelRuleNames.(Iname)>"/>.
<else>
/// Enter a parse tree produced by \<see cref="<file.parserName>.<Iname>"/>.
<endif>
/// \</summary>
/// \<param name="context">The parse tree.\</param>
void Enter<Iname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<Iname; format="cap">Context
context);
/// \<summary>
<if(file.listenerLabelRuleNames.(Iname))>
/// Exit a parse tree produced by the \<c><Iname>\</c>
/// labeled alternative in \<see cref="<file.parserName>.<file.listenerLabelRuleNames.(Iname)>"/>.
<else>
/// Exit a parse tree produced by \<see cref="<file.parserName>.<Iname>"/>.
<endif>
/// \</summary>
/// \<param name="context">The parse tree.\</param>
void Exit<Iname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<Iname; format="cap">Context
context);}; separator="\n"
}

```

```

<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

BaseListenerFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<header>

using Antlr4.Runtime.Misc;
using IErrorNode = Antlr4.Runtime.Tree.IErrorNode;
using ITreeNode = Antlr4.Runtime.Tree.ITreeNode;
using IToken = Antlr4.Runtime.IToken;
using ParserRuleContext = Antlr4.Runtime.ParserRuleContext;

/// \<summary>
/// This class provides an empty implementation of \<see cref="I<file.grammarName>Listener"/>,
/// which can be extended to create a listener which only needs to handle a subset
/// of the available methods.
/// \</summary>
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.Diagnostics.DebuggerNonUserCode]
[System.CLSCompliant(false)]
public partial class <file.grammarName>BaseListener : I<file.grammarName>Listener {
    <file.listenerNames: {Iname |
    /// \<summary>
    <if(file.listenerLabelRuleNames.(Iname))>
    /// Enter a parse tree produced by the \<c><Iname>\</c>
    /// labeled alternative in \<see cref="<file.parserName>.<file.listenerLabelRuleNames.(Iname)>"/>.
    <else>
    /// Enter a parse tree produced by \<see cref="<file.parserName>.<Iname>"/>.
    <endif>
    /// \<para>The default implementation does nothing.\</para>
    /// \</summary>
    /// \<param name="context">The parse tree.\</param>
    public virtual void Enter<Iname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<Iname;
    format="cap">Context context) { \}
    /// \<summary>
    <if(file.listenerLabelRuleNames.(Iname))>
    /// Exit a parse tree produced by the \<c><Iname>\</c>
    /// labeled alternative in \<see cref="<file.parserName>.<file.listenerLabelRuleNames.(Iname)>"/>.
    <else>
    /// Exit a parse tree produced by \<see cref="<file.parserName>.<Iname>"/>.
    <endif>
    /// \<para>The default implementation does nothing.\</para>

```

```

/// \</summary>
/// \<param name="context">The parse tree.\</param>
public virtual void Exit<Iname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<Iname;
format="cap">Context context) { \}); separator="\n"

/// \<inheritdoc/>
/// \<remarks>The default implementation does nothing.\</remarks>
public virtual void EnterEveryRule([NotNull] ParserRuleContext context) { }
/// \<inheritdoc/>
/// \<remarks>The default implementation does nothing.\</remarks>
public virtual void ExitEveryRule([NotNull] ParserRuleContext context) { }
/// \<inheritdoc/>
/// \<remarks>The default implementation does nothing.\</remarks>
public virtual void VisitTerminal([NotNull] ITerminalNode node) { }
/// \<inheritdoc/>
/// \<remarks>The default implementation does nothing.\</remarks>
public virtual void VisitErrorNode([NotNull] IErrorNode node) { }
}
<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

```

```

VisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<header>
using Antlr4.Runtime.Misc;
using Antlr4.Runtime.Tree;
using IToken = Antlr4.Runtime.IToken;

```

```

/// \<summary>
/// This interface defines a complete generic visitor for a parse tree produced
/// by \<see cref="<csIdentifier.(file.parserName)>">.
/// \</summary>
/// \<typeparam name="Result">The return type of the visit operation.\</typeparam>
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.CLSCompliant(false)]
public interface I<file.grammarName>Visitor<Result> : IParseTreeVisitor<Result> {
<file.visitorNames>: { Iname |
/// \<summary>
<if(file.visitorLabelRuleNames.(Iname))>
/// Visit a parse tree produced by the \<c><Iname>\</c>
/// labeled alternative in \<see cref="<file.parserName>.<file.visitorLabelRuleNames.(Iname)>">.
<else>
/// Visit a parse tree produced by \<see cref="<file.parserName>.<Iname>">.

```

```

<endif>
/// \</summary>
/// \<param name="context">The parse tree.\</param>
/// \<return>The visitor result.\</return>
Result Visit<lname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<lname; format="cap">Context
context);); separator="\n">
}
<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

```

```

BaseVisitorFile(file, header, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>
<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<header>
using Antlr4.Runtime.Misc;
using Antlr4.Runtime.Tree;
using IToken = Antlr4.Runtime.IToken;
using ParserRuleContext = Antlr4.Runtime.ParserRuleContext;

/// \<summary>
/// This class provides an empty implementation of \<see cref="I<file.grammarName>Visitor{Result}">,
/// which can be extended to create a visitor which only needs to handle a subset
/// of the available methods.
/// \</summary>
/// \<typeparam name="Result">The return type of the visit operation.\</typeparam>
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.Diagnostics.DebuggerNonUserCode]
[System.CLSCompliant(false)]
public partial class <file.grammarName>BaseVisitor<Result> : AbstractParseTreeVisitor<Result>,
I<file.grammarName>Visitor<Result> {
    <file.visitorNames:{lname |
/// \<summary>
<if(file.visitorLabelRuleNames.(lname))>
/// Visit a parse tree produced by the \<c><lname>\</c>
/// labeled alternative in \<see cref="<file.parserName>.<file.visitorLabelRuleNames.(lname)>">.
<else>
/// Visit a parse tree produced by \<see cref="<file.parserName>.<lname>">.
<endif>
/// \<para>
/// The default implementation returns the result of calling \<see
cref="AbstractParseTreeVisitor{Result}.VisitChildren(IRuleNode)">
/// on \<paramref name="context">.
/// \</para>
/// \</summary>

```

```

/// \<param name="context">The parse tree.\</param>
/// \<return>The visitor result.\</return>
public virtual Result Visit<Iname; format="cap">([NotNull] <csIdentifier.(file.parserName)>.<Iname;
format="cap">Context context) { return VisitChildren(context); \}}; separator="\n">
}
<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

```

```

fileHeader(grammarFileName, ANTLRVersion) ::= <<
//-----
// \<auto-generated>
//   This code was generated by a tool.
//   ANTLR Version: <ANTLRVersion>
//
//   Changes to this file may cause incorrect behavior and will be lost if
//   the code is regenerated.
// \</auto-generated>
//-----

// Generated from <grammarFileName> by ANTLR <ANTLRVersion>

// Unreachable code detected
#pragma warning disable 0162
// The variable '...' is assigned but its value is never used
#pragma warning disable 0219
// Missing XML comment for publicly visible type or member '...'
#pragma warning disable 1591
// Ambiguous reference in cref attribute
#pragma warning disable 419

>>

```

```

Parser(parser, funcs, atn, sempredFuncs, superClass) ::= <<
<Parser_(ctor="parser_ctor", ...)>
>>

```

```

Parser_(parser, funcs, atn, sempredFuncs, ctor, superClass) ::= <<
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.CLSCompliant(false)]
public partial class <csIdentifier.(parser.name)> : <superClass; null="Parser"> {
protected static DFA[] decisionToDFA;
protected static PredictionContextCache sharedContextCache = new PredictionContextCache();
<if(parser.tokens)>
public const int
<parser.tokens:{k | <k>=<parser.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>

```

```

<if(parser.rules)>
public const int
  <parser.rules:{r | RULE_<r.name> = <r.index>}; separator=", ", wrap, anchor>;
<endif>
public static readonly string[] ruleNames = {
  <parser.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
};

<vocabulary(parser.literalNames, parser.symbolicNames)>

public override string GrammarFileName { get { return "<parser.grammarFileName>"; } }

public override string[] RuleNames { get { return ruleNames; } }

public override string SerializedAtn { get { return new string(_serializedATN); } }

static <csIdentifier.(parser.name)>() {
  decisionToDFA = new DFA[_ATN.NumberOfDecisions];
  for (int i = 0; i < _ATN.NumberOfDecisions; i++) {
    decisionToDFA[i] = new DFA(_ATN.GetDecisionState(i), i);
  }
}

<namedActions.members>
<parser:(ctor)()>
<funcs; separator="\n">

<if(sempredFuncs)>
public override bool Sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
  switch (ruleIndex) {
    <parser.sempredFuncs.values:{f}
case <f.ruleIndex>: return <f.name>_sempred((<f.ctxType>)_localctx, predIndex);}; separator="\n">
  }
  return true;
}
<sempredFuncs.values; separator="\n">
<endif>

<atn>
}
>>

vocabulary(literalNames, symbolicNames) ::= <<
private static readonly string[] _LiteralNames = {
  <literalNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
};
private static readonly string[] _SymbolicNames = {
  <symbolicNames:{t | <t>}; null="null", separator=", ", wrap, anchor>
};

```

```

};
public static readonly IVocabulary DefaultVocabulary = new Vocabulary(_LiteralNames, _SymbolicNames);

[NotNull]
public override IVocabulary Vocabulary
{
    get
    {
        return DefaultVocabulary;
    }
}
>>

dumpActions(recog, argFuncs, actionFuncs, sempredFuncs) ::= <<
<if(actionFuncs)>
public override void Action(RuleContext _localctx, int ruleIndex, int actionIndex) {
    switch (ruleIndex) {
        <recog.actionFuncs.values: {f|
case <f.ruleIndex> : <f.name>_action(<if(!recog.modes)><f.ctxType><endif>_localctx, actionIndex); break;};
separator="\n">
    }
}
<actionFuncs.values; separator="\n">
<endif>
<if(sempredFuncs)>
public override bool Sempred(RuleContext _localctx, int ruleIndex, int predIndex) {
    switch (ruleIndex) {
        <recog.sempredFuncs.values: {f|
case <f.ruleIndex> : return <f.name>_sempred(<if(!recog.modes)><f.ctxType><endif>_localctx, predIndex);};
separator="\n">
    }
    return true;
}
<sempredFuncs.values; separator="\n">
<endif>
>>

parser_ctor(parser) ::= <<
public <csIdentifier.(parser.name)>(ITokenStream input) : this(input, Console.Out, Console.Error) { }

public <csIdentifier.(parser.name)>(ITokenStream input, TextWriter output, TextWriter errorOutput)
: base(input, output, errorOutput)
{
    Interpreter = new ParserATNSimulator(this, _ATN, decisionToDFA, sharedContextCache);
}
>>

/* This generates a private method since the actionIndex is generated, making an

```

```

* overriding implementation impossible to maintain.
*/
RuleActionFunction(r, actions) ::= <<
private void <r.name>_action(<r.ctxType> _localctx, int actionIndex) {
    switch (actionIndex) {
        <actions:{index|
case <index>: <actions.(index)> break;}; separator="\n">
    }
}
>>

/* This generates a private method since the predIndex is generated, making an
* overriding implementation impossible to maintain.
*/
RuleSempredFunction(r, actions) ::= <<
private bool <r.name>_sempred(<r.ctxType> _localctx, int predIndex) {
    switch (predIndex) {
        <actions:{index|
case <index>: return <actions.(index)>;}; separator="\n">
    }
    return true;
}
>>

RuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,namedActions,finallyAction,postamble,exceptions)
::= <<

<if(ruleCtx)>
<ruleCtx>
<endif>
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">

[RuleVersion(<namedActions.version; null="0">)]
<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>public <endif><currentRule.ctxType>
<csIdentifier.(currentRule.name)><(<args; separator=", ">) {
    <currentRule.ctxType> _localctx = new <currentRule.ctxType>(Context, State<currentRule.args:{a | ,
<csIdentifier.(a.name)>}>);
    EnterRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>);
    <namedActions.init>
    <locals; separator="\n">
    try {
    <if(currentRule.hasLookaheadBlock)>
        int _alt;
    <endif>
    <code>
    <postamble; separator="\n">
    <namedActions.after>
    }
}

```

```

<if(exceptions)>
<exceptions; separator="\n">
<else>
catch (RecognitionException re) {
  _localctx.exception = re;
  ErrorHandler.ReportError(this, re);
  ErrorHandler.Recover(this, re);
}
<endif>
finally {
  <finallyAction>
  ExitRule();
}
return _localctx;
}
>>

LeftFactoredRuleFunction(currentRule,args,code,locals,namedActions,finallyAction,postamble) ::=
<<

<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>private <endif><currentRule.ctxType>
<csIdentifier.(currentRule.name)><(args; separator=", "> {
  <currentRule.ctxType> _localctx = new <currentRule.ctxType>(Context, State<currentRule.args:{a | ,
  <csIdentifier.(a.name)>>>);
  EnterLeftFactoredRule(_localctx, <currentRule.startState>, RULE_<currentRule.variantOf>);
  <namedActions.init>
  <locals; separator="\n">
  try {
  <if(currentRule.hasLookaheadBlock)>
    int _alt;
  <endif>
  <code>
  <postamble; separator="\n">
  <namedActions.after>
  }
  catch (RecognitionException re) {
    _localctx.exception = re;
    ErrorHandler.ReportError(this, re);
    ErrorHandler.Recover(this, re);
  }
  finally {
    <finallyAction>
    ExitRule();
  }
  return _localctx;
}
>>

```

```

// This behaves similar to RuleFunction (enterRule is called, and no adjustments
// are made to the parse tree), but since it's still a variant no context class
// needs to be generated.
LeftUnfactoredRuleFunction(currentRule,args,code,locals,namedActions,finallyAction,postamble) ::=
<<

<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>private <endif><currentRule.ctxType>
<csIdentifier.(currentRule.name)><(args; separator=", "> {
  <currentRule.ctxType> _localctx = new <currentRule.ctxType>(Context, State<currentRule.args:{a | ,
<csIdentifier.(a.name)>>>);
  EnterRule(_localctx, <currentRule.startState>, RULE_<currentRule.variantOf>);
  <namedActions.init>
  <locals; separator="\n">
  try {
  <if(currentRule.hasLookaheadBlock)>
    int _alt;
  <endif>
  <code>
  <postamble; separator="\n">
  <namedActions.after>
  }
  catch (RecognitionException re) {
    _localctx.exception = re;
    ErrorHandler.ReportError(this, re);
    ErrorHandler.Recover(this, re);
  }
  finally {
    <finallyAction>
    ExitRule();
  }
  return _localctx;
}
>>

```

```

LeftRecursiveRuleFunction(currentRule,args,code,locals,ruleCtx,altLabelCtxs,
  namedActions,finallyAction,postamble) ::=
<<

```

```

<ruleCtx>
<altLabelCtxs:{l | <altLabelCtxs.(l)>}; separator="\n">

[RuleVersion(<namedActions.version; null="0">)]
<if(currentRule.modifiers)><currentRule.modifiers:{f | <f> }><else>public <endif><currentRule.ctxType>
<csIdentifier.(currentRule.name)><(args; separator=", "> {
  return <csIdentifier.(currentRule.name)><(0<currentRule.args:{a | , <csIdentifier.(a.name)>>>);
}

private <currentRule.ctxType> <csIdentifier.(currentRule.name)><(int _p<args:{a | , <a>>}> {

```

```

ParserRuleContext _parentctx = Context;
int _parentState = State;
<currentRule.ctxType> _localctx = new <currentRule.ctxType>(Context, _parentState<currentRule.args:{ a | ,
<csIdentifier.(a.name)>>>);
<currentRule.ctxType> _prevctx = _localctx;
int _startState = <currentRule.startState>;
EnterRecursionRule(_localctx, <currentRule.startState>, RULE_<currentRule.name>, _p);
<namedActions.init>
<locals; separator="\n">
try {
<if(currentRule.hasLookaheadBlock)>
int _alt;
<endif>
<code>
<postamble; separator="\n">
<namedActions.after>
}
catch (RecognitionException re) {
_localctx.exception = re;
ErrorHandler.ReportError(this, re);
ErrorHandler.Recover(this, re);
}
finally {
<finallyAction>
UnrollRecursionContexts(_parentctx);
}
return _localctx;
}
>>

```

```

CodeBlockForOuterMostAlt(currentOuterMostAltCodeBlock, locals, preamble, ops) ::= <<
<if(currentOuterMostAltCodeBlock.altLabel)>_localctx = new <currentOuterMostAltCodeBlock.altLabel;
format="cap">Context(_localctx);<endif>
EnterOuterAlt(_localctx, <currentOuterMostAltCodeBlock.alt.altNum>);
<CodeBlockForAlt(currentAltCodeBlock=currentOuterMostAltCodeBlock, ...)>
>>

```

```

CodeBlockForAlt(currentAltCodeBlock, locals, preamble, ops) ::= <<
{
<locals; separator="\n">
<preamble; separator="\n">
<ops; separator="\n">
}
>>

```

```

LL1AltBlock(choice, preamble, alts, error) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);

```

```

<if(choice.label)><labelref(choice.label)> = TokenStream.LT(1);<endif>
<preamble; separator="\n">
switch (TokenStream.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
<error>
}
>>

```

```

LL1OptionalBlock(choice, alts, error) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
switch (TokenStream.LA(1)) {
<choice.altLook,alts:{look,alt| <cases(ttypes=look)>
<alt>
break;}; separator="\n">
default:
break;
}
>>

```

```

LL1OptionalBlockSingleAlt(choice, expr, alts, preamble, error, followExpr) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
<preamble; separator="\n">
if (<expr>) {
<alts; separator="\n">
}
<!else if ( !(<followExpr>) ) <error!>
>>

```

```

LL1StarBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
<preamble; separator="\n">
while (<loopExpr>) {
<alts; separator="\n">
State = <choice.loopBackStateNumber>;
ErrorHandler.Sync(this);
<iteration>
}
>>

```

```

LL1PlusBlockSingleAlt(choice, loopExpr, alts, preamble, iteration) ::= <<
State = <choice.blockStartStateNumber>;<! alt block decision !>
ErrorHandler.Sync(this);

```

```

<preamble; separator="\n">
do {
  <alts; separator="\n">
  State = <choice.stateNumber>;<! loopback/exit decision !>
  ErrorHandler.Sync(this);
  <iteration>
} while ( <loopExpr> );
>>

// LL(*) stuff

AltBlock(choice, preamble, alts, error) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
<if(choice.label)><labelref(choice.label)> = TokenStream.LT(1);<endif>
<preamble; separator="\n">
switch ( Interpreter.AdaptivePredict(TokenStream,<choice.decision>,Context) ) {
<alts:{ alt |
case <i>:
  <alt>
  break;}; separator="\n">
}
>>

OptionalBlock(choice, alts, error) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
switch ( Interpreter.AdaptivePredict(TokenStream,<choice.decision>,Context) ) {
<alts:{ alt |
case <i><if(!choice.ast.greedy)>+1<endif>:
  <alt>
  break;}; separator="\n">
}
>>

StarBlock(choice, alts, sync, iteration) ::= <<
State = <choice.stateNumber>;
ErrorHandler.Sync(this);
_alt = Interpreter.AdaptivePredict(TokenStream,<choice.decision>,Context);
while ( _alt!=<choice.exitAlt> && _alt!=global::Antlr4.Runtime.Atn.ATN.INVALID_ALT_NUMBER ) {
if ( _alt==1<if(!choice.ast.greedy)>+1<endif> ) {
  <iteration>
  <alts> <! should only be one !>
}
State = <choice.loopBackStateNumber>;
ErrorHandler.Sync(this);
_alt = Interpreter.AdaptivePredict(TokenStream,<choice.decision>,Context);
}

```

>>

```
PlusBlock(choice, alts, error) ::= <<
State = <choice.blockStartStateNumber>;<! alt block decision !>
ErrorHandler.Sync(this);
_alt = 1<if(!choice.ast.greedy)>+1<endif>;
do {
  switch (_alt) {
    <alts:{alt|
case <i><if(!choice.ast.greedy)>+1<endif>:
    <alt>
    break;}; separator="\n">
    default:
    <error>
  }
  State = <choice.loopBackStateNumber>;<! loopback/exit decision !>
  ErrorHandler.Sync(this);
  _alt = Interpreter.AdaptivePredict(TokenStream,<choice.decision>,Context);
} while ( _alt!=<choice.exitAlt> && _alt!=global::Antlr4.Runtime.Atn.ATN.INVALID_ALT_NUMBER );
>>
```

```
Sync(s) ::= "Sync(<s.expecting.name>);"
```

```
ThrowNoViableAlt(t) ::= "throw new NoViableAltException(this);"
```

```
TestSetInline(s) ::= <<
<s.bitsets:{bits | <if(rest(rest(bits.ttypes)))><bitsetBitfieldComparison(s, bits)><else><bitsetInlineComparison(s,
bits)><endif>}; separator=" || ">
>>
```

```
// Java language spec 15.19 - shift operators mask operands rather than overflow to 0... need range test
testShiftInRange(shiftAmount) ::= <<
((<shiftAmount>) & ~0x3f) == 0
>>
```

```
// produces smaller bytecode only when bits.ttypes contains more than two items
bitsetBitfieldComparison(s, bits) ::= <%
(<testShiftInRange({<offsetShift(s.varName, bits.shift)>})> && ((1L \<< <offsetShift(s.varName, bits.shift)>) &
(<bits.ttypes:{ ttype | (1L \<< <offsetShift(tokenType.(ttype), bits.shift)>)}); separator=" | ">) != 0)
%>
```

```
isZero ::= [
"0":true,
default:false
]
```

```
offsetShift(shiftAmount, offset) ::= <%
<if(!isZero.(offset))><shiftAmount> - <offset><else><shiftAmount><endif>
```

```

%>

// produces more efficient bytecode when bits.ttypes contains at most two items
bitsetInlineComparison(s, bits) ::= <%
<bits.ttypes:{ ttype | <s.varName>==<tokenType.(ttype)>}; separator=" || ">
%>

cases(ttypes) ::= <<
<ttypes:{ t | case <tokenType.(t)>}; separator="\n">
>>

InvokeRule(r, argExprsChunks) ::= <<
State = <r.stateNumber>;
<if(r.labels)><r.labels:{ l | <labelref(l)> =
}><endif><csIdentifier.(r.name)><(if(r.ast.options.p)><r.ast.options.p><if(argExprsChunks)><endif><endif><arg
ExprsChunks>;
>>

MatchToken(m) ::= <<
State = <m.stateNumber>;
<if(m.labels)><m.labels:{ l | <labelref(l)> = }><endif>Match(<tokenType.(m.name)>);
>>

MatchSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, false)>"

MatchNotSet(m, expr, capture) ::= "<CommonSetStuff(m, expr, capture, true)>"

CommonSetStuff(m, expr, capture, invert) ::= <<
State = <m.stateNumber>;
<if(m.labels)><m.labels:{ l | <labelref(l)> = }>TokenStream.LT(1);<endif>
<capture>
if ( <if(invert)><m.varName> \<= 0 || <else>!<endif><(expr)> ) {
  <if(m.labels)><m.labels:{ l | <labelref(l)> = }><endif>ErrorHandler.RecoverInline(this);
}
else {
  ErrorHandler.ReportMatch(this);
  Consume();
}
>>

Wildcard(w) ::= <<
State = <w.stateNumber>;
<if(w.labels)><w.labels:{ l | <labelref(l)> = }><endif>MatchWildcard();
>>

// ACTION STUFF

Action(a, foo, chunks) ::= "<chunks>"

```

```

ArgAction(a, chunks) ::= "<chunks>"

SemPred(p, chunks, failChunks) ::= <<
State = <p.stateNumber>;
if (!(<chunks>)) throw new FailedPredicateException(this, <p.predicate><if(failChunks)>,
<failChunks><elseif(p.msg)>, <p.msg><endif>);
>>

ExceptionClause(e, catchArg, catchAction) ::= <<
catch (<catchArg>) {
  <catchAction>
}
>>

// lexer actions are not associated with model objects

LexerSkipCommand() ::= "Skip();"
LexerMoreCommand() ::= "More();"
LexerPopModeCommand() ::= "PopMode();"

LexerTypeCommand(arg, grammar) ::= "_type = <tokenType.(arg)>);"
LexerChannelCommand(arg, grammar) ::= "_channel = <channelName.(arg)>);"
LexerModeCommand(arg, grammar) ::= "_mode = <modeName.(arg)>);"
LexerPushModeCommand(arg, grammar) ::= "PushMode(<modeName.(arg)>);"

ActionText(t) ::= "<t.text>"
ActionTemplate(t) ::= "<t.st>"
ArgRef(a) ::= "_localctx.<csIdentifier.(a.name)>"
LocalRef(a) ::= "_localctx.<csIdentifier.(a.name)>"
RetValRef(a) ::= "_localctx.<csIdentifier.(a.name)>"
QRetValRef(a) ::= "<ctx(a)>.<a.dict>.<csIdentifier.(a.name)>"
/** How to translate $tokenLabel */
TokenRef(t) ::= "<ctx(t)>.<csIdentifier.(tokenType.(t.name))>"
LabelRef(t) ::= "<ctx(t)>.<csIdentifier.(t.name)>"
ListLabelRef(t) ::= "<ctx(t)>.<ListLabelName(csIdentifier.(t.name))>"
SetAttr(s,rhsChunks) ::= "<ctx(s)>.<csIdentifier.(s.name)> = <rhsChunks>);"

TokenLabelType() ::= "<file.TokenLabelType; null={IToken}>"
InputSymbolType() ::= "<file.InputSymbolType; null={IToken}>"

TokenPropertyRef_text(t) ::= "<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.Text:null)"
TokenPropertyRef_type(t) ::= "<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.Type:0)"
TokenPropertyRef_line(t) ::= "<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.Line:0)"
TokenPropertyRef_pos(t) ::=
"<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.CharPositionInLine:0)"
TokenPropertyRef_channel(t) ::=
"<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.Channel:0)"

```

```

TokenPropertyRef_index(t) ::=
"<ctx(t)>.<tokenType.(t.label)>!=null?<ctx(t)>.<tokenType.(t.label)>.TokenIndex:0)"
TokenPropertyRef_int(t) ::=
"<ctx(t)>.<tokenType.(t.label)>!=null?int.Parse(<ctx(t)>.<tokenType.(t.label)>.Text):0)"

RulePropertyRef_start(r) ::= "<ctx(r)>.<r.label>!=null?(<ctx(r)>.<r.label>.Start):null)"
RulePropertyRef_stop(r) ::= "<ctx(r)>.<r.label>!=null?(<ctx(r)>.<r.label>.Stop):null)"
RulePropertyRef_text(r) ::=
"<ctx(r)>.<r.label>!=null?TokenStream.GetText(<ctx(r)>.<r.label>.Start,<ctx(r)>.<r.label>.Stop):null)"
RulePropertyRef_ctx(r) ::= "<ctx(r)>.<r.label>"
RulePropertyRef_parser(r) ::= "this"

ThisRulePropertyRef_start(r) ::= "_localctx.Start"
ThisRulePropertyRef_stop(r) ::= "_localctx.Stop"
ThisRulePropertyRef_text(r) ::= "TokenStream.GetText(_localctx.Start, TokenStream.LT(-1))"
ThisRulePropertyRef_ctx(r) ::= "_localctx"
ThisRulePropertyRef_parser(r) ::= "this"

NonLocalAttrRef(s) ::= <%((<s.ruleName;
format="cap">Context)GetInvokingContext(<s.ruleIndex>)).<csIdentifier.(s.name)>%>
SetNonLocalAttr(s, rhsChunks) ::=
<%((<s.ruleName; format="cap">Context)GetInvokingContext(<s.ruleIndex>)).<csIdentifier.(s.name)> =
<rhsChunks>;%>

AddToLabelList(a) ::= "<ctx(a.label)>.<a.listName>.Add(<labelref(a.label)>);"

TokenDecl(t) ::= "<TokenLabelType() <csIdentifier.(tokenType.(t.name))>"
TokenTypeDecl(t) ::= "int <csIdentifier.(tokenType.(t.name))>);"
TokenListDecl(t) ::= "IList<IToken> <csIdentifier.(tokenType.(t.name))> = new List<IToken>()"
RuleContextDecl(r) ::= "<r.ctxName> <csIdentifier.(r.name)>"
RuleContextListDecl(rdecl) ::= "IList<<rdecl.ctxName>> <csIdentifier.(rdecl.name)> = new
List<<rdecl.ctxName>>()"

contextGetterCollection(elementType) ::= <%
<elementType>[]
%>

ContextTokenGetterDecl(t) ::=
[System.Diagnostics.DebuggerNonUserCode] public ITerminalNode <csIdentifier.(tokenType.(t.name))>() {
return GetToken(<csIdentifier.(parser.name)>.<csIdentifier.(tokenType.(t.name))>, 0); }
ContextTokenListGetterDecl(t) ::= <<
[System.Diagnostics.DebuggerNonUserCode] public <contextGetterCollection("ITerminalNode")>
<csIdentifier.(tokenType.(t.name))>() { return
GetTokens(<csIdentifier.(parser.name)>.<csIdentifier.(tokenType.(t.name))>); }
>>
ContextTokenListIndexedGetterDecl(t) ::= <<
[System.Diagnostics.DebuggerNonUserCode] public ITerminalNode <csIdentifier.(tokenType.(t.name))>(int i) {
return GetToken(<csIdentifier.(parser.name)>.<csIdentifier.(tokenType.(t.name))>, i);

```

```

}
>>
ContextRuleGetterDecl(r) ::= <<
[System.Diagnostics.DebuggerNonUserCode] public <r.ctxName> <csIdentifier.(r.name)>() {
return GetRuleContext\<<r.ctxName>\>(0);
}
>>
ContextRuleListGetterDecl(r) ::= <<
[System.Diagnostics.DebuggerNonUserCode] public <contextGetterCollection({<r.ctxName>})>
<csIdentifier.(r.name)>() {
return GetRuleContexts\<<r.ctxName>\>();
}
>>
ContextRuleListIndexedGetterDecl(r) ::= <<
[System.Diagnostics.DebuggerNonUserCode] public <r.ctxName> <csIdentifier.(r.name)>(int i) {
return GetRuleContext\<<r.ctxName>\>(i);
}
>>

LexerRuleContext() ::= "RuleContext"

/** The rule context name is the rule followed by a suffix; e.g.,
* r becomes rContext.
*/
RuleContextNameSuffix() ::= "Context"

ImplicitTokenLabel(tokenName) ::= "_<tokenType.(tokenName)>"
ImplicitRuleLabel(ruleName) ::= "_<ruleName>"
ImplicitSetLabel(id) ::= "_tset<id>"
ListLabelName(label) ::= "_<label>"

CaptureNextToken(d) ::= "<d.varName> = TokenStream.LT(1);"
CaptureNextTokenType(d) ::= "<d.varName> = TokenStream.LA(1);"

StructDecl(struct,ctorAttrs,attrs, getters,dispatchMethods,interfaces,extensionMembers,
superClass={ParserRuleContext}) ::= <<
public partial class <struct.name> :
<if(contextSuperClass)><contextSuperClass><else>ParserRuleContext<endif><if(interfaces)>, <interfaces;
separator=", "><endif> {
<attrs:{a | public <a>;}; separator="\n">
<getters:{g | <g>;}; separator="\n">
<if(ctorAttrs)>public <struct.name>(ParserRuleContext parent, int invokingState) : base(parent, invokingState) {
}<endif>
public <struct.name>(ParserRuleContext parent, int invokingState<ctorAttrs:{a | , <a>}>)
: base(parent, invokingState)
{
<struct.ctorAttrs:{a | this.<csIdentifier.(a.name)> = <csIdentifier.(a.name)>;}; separator="\n">
}
}

```

```

public override int RuleIndex { get { return RULE_<struct.derivedFromName>; } }
<if(struct.provideCopyFrom)> <! don't need copy unless we have subclasses !>
public <struct.name>() { }
public virtual void CopyFrom(<struct.name> context) {
    base.CopyFrom(context);
    <struct.attrs:{ a | this.<csIdentifier.(a.name)> = context.<csIdentifier.(a.name)>; }; separator="\n">
}
<endif>
<dispatchMethods; separator="\n">
<extensionMembers; separator="\n">
}
>>

```

```

AltLabelStructDecl(struct,attrs,getters,dispatchMethods) ::= <<
public partial class <struct.name> : <currentRule.name; format="cap">Context {
    <attrs:{ a | public <a>; }; separator="\n">
    <getters:{ g | <g>; }; separator="\n">
    public <struct.name>(<currentRule.name; format="cap">Context context) { CopyFrom(context); }
    <dispatchMethods; separator="\n">
}
>>

```

```

ListenerDispatchMethod(method) ::= <<
[System.Diagnostics.DebuggerNonUserCode]
public override void <if(method.isEnter)>Enter<else>Exit<endif>Rule(IParseTreeListener listener) {
    I<parser.grammarName>Listener typedListener = listener as I<parser.grammarName>Listener;
    if (typedListener != null) typedListener.<if(method.isEnter)>Enter<else>Exit<endif><struct.derivedFromName;
format="cap">(this);
}
>>

```

```

VisitorDispatchMethod(method) ::= <<
[System.Diagnostics.DebuggerNonUserCode]
public override TResult Accept<TResult>(IParseTreeVisitor<TResult> visitor) {
    I<parser.grammarName>Visitor<TResult> typedVisitor = visitor as I<parser.grammarName>Visitor<TResult>;
    if (typedVisitor != null) return typedVisitor.Visit<struct.derivedFromName; format="cap">(this);
    else return visitor.VisitChildren(this);
}
>>

```

```

AttributeDecl(d) ::= "<d.type> <csIdentifier.(d.name)><if(d.initValue)> = <d.initValue><endif>"

```

```

/** If we don't know location of label def x, use this template */

```

```

labelref(x) ::= "<if(!x.isLocal)><typedContext(x.ctx)>.<endif><csIdentifier.(x.name)>"

```

```

/** For any action chunk, what is correctly-typed context struct ptr? */

```

```

ctx(actionChunk) ::= "<typedContext(actionChunk.ctx)>"

```

```

// only casts _localctx to the type when the cast isn't redundant (i.e. to a sub-context for a labeled alt)
typedContext(ctx) ::= "<if(ctx.provideCopyFrom)>((<ctx.name>)_localctx)<else>_localctx<endif>"

// used for left-recursive rules
recRuleAltPredicate(ruleName,opPrec) ::= "Precpred(Context, <opPrec>)"
recRuleSetReturnAction(src,name) ::= "$<name>=<src>.<name>;"
recRuleSetStopToken() ::= "Context.Stop = TokenStream.LT(-1);"

recRuleAltStartAction(ruleName, ctxName, label, isListLabel) ::= <<
_localctx = new <ctxName>Context(_parentctx, _parentState);
<if(label)>
<if(isListLabel)>
_localctx.<label>.Add(_prevctx);
<else>
_localctx.<label> = _prevctx;
<endif>
<endif>
PushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
>>

recRuleLabeledAltStartAction(ruleName, currentAltLabel, label, isListLabel) ::= <<
_localctx = new <currentAltLabel; format="cap">Context(new <ruleName; format="cap">Context(_parentctx,
_parentState));
<if(label)>
<if(isListLabel)>
((<currentAltLabel; format="cap">Context)_localctx).<label>.Add(_prevctx);
<else>
((<currentAltLabel; format="cap">Context)_localctx).<label> = _prevctx;
<endif>
<endif>
PushNewRecursionContext(_localctx, _startState, RULE_<ruleName>);
>>

recRuleReplaceContext(ctxName) ::= <<
_localctx = new <ctxName>Context(_localctx);
Context = _localctx;
_prevctx = _localctx;
>>

recRuleSetPrevCtx() ::= <<
if ( ParseListeners!=null )
TriggerExitRuleEvent();
_prevctx = _localctx;
>>

LexerFile(file, lexer, namedActions) ::= <<
<fileHeader(file.grammarFileName, file.ANTLRVersion)>

```

```

<if(file.genPackage)>
namespace <file.genPackage> {
<endif>
<namedActions.header>
using System;
using System.IO;
using System.Text;
using Antlr4.Runtime;
using Antlr4.Runtime.Atn;
using Antlr4.Runtime.Misc;
using DFA = Antlr4.Runtime.Dfa.DFA;

```

```

<lexer>
<if(file.genPackage)>
} // namespace <file.genPackage>
<endif>
>>

```

```

Lexer(lexer, atn, actionFuncs, sempredFuncs, superClass) ::= <<
[System.CodeDom.Compiler.GeneratedCode("ANTLR", "<file.ANTLRVersion>")]
[System.CLSCompliant(false)]
public partial class <csIdentifier.(lexer.name)> : <superClass; null="Lexer"> {
protected static DFA[] decisionToDFA;
protected static PredictionContextCache sharedContextCache = new PredictionContextCache();
<if(lexer.tokens)>
public const int
<lexer.tokens:{k | <tokenType.(k)>=<lexer.tokens.(k)>}; separator=", ", wrap, anchor>;
<endif>
<if(lexer.channels)>
public const int
<lexer.channels:{k | <csIdentifier.(k)>=<lexer.channels.(k)>}; separator=", ", wrap, anchor>;
<endif>
<if(rest(lexer.modes))>
public const int
<rest(lexer.modes):{m | <m>=<i>}; separator=", ", wrap, anchor>;
<endif>
public static string[] channelNames = {
"DEFAULT_TOKEN_CHANNEL", "HIDDEN" <if (lexer.channels)>, <lexer.channels:{c | <c>}; separator=", ",
wrap, anchor><endif>
};

public static string[] modeNames = {
<lexer.modes:{m | "<m>"}; separator=", ", wrap, anchor>
};

public static readonly string[] ruleNames = {
<lexer.ruleNames:{r | "<r>"}; separator=", ", wrap, anchor>
};

```

```

<namedActions.members>

public <csIdentifier.(lexer.name)>(ICharStream input)
: this(input, Console.Out, Console.Error) { }

public <csIdentifier.(lexer.name)>(ICharStream input, TextWriter output, TextWriter errorOutput)
: base(input, output, errorOutput)
{
    Interpreter = new LexerATNSimulator(this, _ATN, decisionToDFA, sharedContextCache);
}

<vocabulary(lexer.literalNames, lexer.symbolicNames)>

public override string GrammarFileName { get { return "<lexer.grammarFileName>"; } }

public override string[] RuleNames { get { return ruleNames; } }

public override string[] ChannelNames { get { return channelNames; } }

public override string[] ModeNames { get { return modeNames; } }

public override string SerializedAtn { get { return new string(_serializedATN); } }

static <csIdentifier.(lexer.name)>() {
    decisionToDFA = new DFA[_ATN.NumberOfDecisions];
    for (int i = 0; i < _ATN.NumberOfDecisions; i++) {
        decisionToDFA[i] = new DFA(_ATN.GetDecisionState(i), i);
    }
}
<dumpActions(lexer, "", actionFuncs, sempredFuncs)>
<atn>
}
>>

SerializedATN(model) ::= <<
private static char[] _serializedATN = {
    <model.serialized; separator=", ", wrap>,
};

public static readonly ATN _ATN =
    new ATNDeserializer().Deserialize(_serializedATN);

>>

initValue(typeName) ::= <<

```

```
default(<typeName>)
```

```
>>
```

```
codeFileExtension() ::= ".cs"
```

```
modeName ::= [  
  "DEFAULT_MODE" : "DefaultMode",  
  default : key  
]
```

```
channelName ::= [  
  "HIDDEN" : "Hidden",  
  "DEFAULT_TOKEN_CHANNEL" : "DefaultTokenChannel",  
  default : key  
]
```

```
tokenType ::= [  
  "EOF" : "Eof",  
  default : key  
]
```

```
csIdentifier ::= [  
  "abstract" : "@abstract",  
  "as" : "@as",  
  "base" : "@base",  
  "bool" : "@bool",  
  "break" : "@break",  
  "byte" : "@byte",  
  "case" : "@case",  
  "catch" : "@catch",  
  "char" : "@char",  
  "checked" : "@checked",  
  "class" : "@class",  
  "const" : "@const",  
  "continue" : "@continue",  
  "decimal" : "@decimal",  
  "default" : "@default",  
  "delegate" : "@delegate",  
  "do" : "@do",  
  "double" : "@double",  
  "else" : "@else",  
  "enum" : "@enum",  
  "event" : "@event",  
  "explicit" : "@explicit",  
  "extern" : "@extern",  
  "false" : "@false",  
  "finally" : "@finally",  
  "fixed" : "@fixed",
```

"float" : "@float",  
"for" : "@for",  
"foreach" : "@foreach",  
"goto" : "@goto",  
"if" : "@if",  
"implicit" : "@implicit",  
"in" : "@in",  
"int" : "@int",  
"interface" : "@interface",  
"internal" : "@internal",  
"is" : "@is",  
"lock" : "@lock",  
"long" : "@long",  
"namespace" : "@namespace",  
"new" : "@new",  
"null" : "@null",  
"object" : "@object",  
"operator" : "@operator",  
"out" : "@out",  
"override" : "@override",  
"params" : "@params",  
"private" : "@private",  
"protected" : "@protected",  
"public" : "@public",  
"readonly" : "@readonly",  
"ref" : "@ref",  
"return" : "@return",  
"sbyte" : "@sbyte",  
"sealed" : "@sealed",  
"short" : "@short",  
"sizeof" : "@sizeof",  
"stackalloc" : "@stackalloc",  
"static" : "@static",  
"string" : "@string",  
"struct" : "@struct",  
"switch" : "@switch",  
"this" : "@this",  
"throw" : "@throw",  
"true" : "@true",  
"try" : "@try",  
"typeof" : "@typeof",  
"uint" : "@uint",  
"ulong" : "@ulong",  
"unchecked" : "@unchecked",  
"unsafe" : "@unsafe",  
"ushort" : "@ushort",  
"using" : "@using",  
"virtual" : "@virtual",

```
"values" : "@values",
"void" : "@void",
"volatile" : "@volatile",
"while" : "@while",
default : key
]
```

Found in path(s):

```
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-
jar/org/antlr/v4/tool/templates/codegen/CSharp/CSharp.stg
```

No license file was found, but licenses were detected in source scan.

```
/*
```

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```

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```
*/
```

```
// File : A3Lexer.g
```

```
// Author : Jim Idle (jimi@temporal-wave.com)
```

```
// Copyright : Free BSD - See @header clause below
```

```
// Version : First implemented as part of ANTLR 3.2 this is the self
```

```
// hosting ANTLR 3 Lexer.
```

```
//
```

```

// Description
// -----
// This is the definitive lexer grammar for parsing ANTLR V3.x.x grammars. All other
// grammars are derived from this grammar via source code control integration (perforce)
// or by the gdiff tool.
//
// This grammar and its associated grmmars A3Parser.g and A3Walker.g exhibit the following
// traits, which are recommended for all production quality grammars:
//
// 1) They are separate grammars, not composite grammars;
// 2) They implement all supporting methods in a superclass (at least this is recommended
//    for language targets that support inheritance;
// 3) All errors are pushed as far down the parsing chain as possible, which means
//    that the lexer tries to defer error reporting to the parser, and the parser
//    tries to defer error reporting to a semantic phase consisting of a single
//    walk of the AST. The reason for this is that the error messages produced
//    from later phases of the parse will generally have better context and so
//    be more useful to the end user. Consider the message: "Syntax error at 'options'"
//    vs: "You cannot specify two options{ } sections in a single grammar file".
// 4) The lexer is 'programmed' to catch common mistakes such as unterminated literals
//    and report them specifically and not just issue confusing lexer mismatch errors.
//
/** Read in an ANTLR grammar and build an AST. Try not to do
 * any actions, just build the tree.
 *
 * The phases are:
 *
 * A3Lexer.g (this file)
 *     A3Parser.g
 *     A3Verify.g (derived from A3Walker.g)
 * assign.types.g
 * define.g
 * buildnfa.g
 * antlr.print.g (optional)
 * codegen.g
 *
 * Terence Parr
 * University of San Francisco
 * 2005
 * Jim Idle (this v3 grammar)
 * Temporal Wave LLC
 * 2009
 */
lexer grammar ANTLRLexer;

// =====
// Note that while this grammar does not care about order of constructs

```

```

// that don't really matter, such as options before @header etc, it must first
// be parsed by the original v2 parser, before it replaces it. That parser does
// care about order of structures. Hence we are constrained by the v2 parser
// for at least the first bootstrap release that causes this parser to replace
// the v2 version.
// =====

// -----
// Options
//
// V3 option directives to tell the tool what we are asking of it for this
// grammar.
//
options {

// Target language is Java, which is the default but being specific
// here as this grammar is also meant as a good example grammar for
// for users.
//
language    = Java;

// The super class that this lexer should expect to inherit from, and
// which contains any and all support routines for the lexer. This is
// commented out in this baseline (definitive or normative grammar)
// - see the ANTLR tool implementation for hints on how to use the super
// class
//
//superclass = AbstractA3Lexer;
}

tokens { SEMPRED; TOKEN_REF; RULE_REF; LEXER_CHAR_SET; ARG_ACTION; }

// Include the copyright in this source and also the generated source
//
@lexer::header {
/*
[The "BSD licence"]
Copyright (c) 2005-2009 Terence Parr
All rights reserved.

```

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```
*/
```

```
package org.antlr.v4.parse;  
import org.antlr.v4.tool.*;  
import org.antlr.v4.runtime.misc.Interval;  
}
```

```
@members {
```

```
public static final int COMMENTS_CHANNEL = 2;
```

```
public CommonTokenStream tokens; // track stream we push to; need for context info  
public boolean isLexerRule = false;
```

```
public void grammarError(ErrorType etype, org.antlr.runtime.Token token, Object... args) { }
```

```
/** scan backwards from current point in this.tokens list
```

```
 * looking for the start of the rule or subrule.
```

```
 * Return token or null if for some reason we can't find the start.
```

```
*/
```

```
public Token getRuleOrSubruleStartToken() {
```

```
    if ( tokens==null ) return null;
```

```
    int i = tokens.index();
```

```
        int n = tokens.size();
```

```
        if ( i>=n ) i = n-1; // seems index == n as we lex
```

```
    while ( i>=0 && i<n ) {
```

```
        int ttype = tokens.get(i).getType();
```

```
        if ( ttype == LPAREN || ttype == TOKEN_REF || ttype == RULE_REF ) {
```

```
            return tokens.get(i);
```

```
        }
```

```
        i--;
```

```
    }
```

```
    return null;
```

```
}
```

```
}
```

```

// -----
// Comments
//
// ANTLR comments can be multi or single line and we don't care
// which particularly. However we also accept Javadoc style comments
// of the form: /** ... */ and we do take care to distinguish those
// from ordinary multi-line comments
// Note how we guide the lexical PATH because we want to issue a decriptive
// error message in case of a standalone '/' character, which makes no
// sense in ANTLR source code. We also trap unterminated multi-line comments
//
fragment DOC_COMMENT : ;
COMMENT
@init {

// Record the start line and offsets as if we need to report an
// unterminated comment, then we want to show the start of the comment
// we think is broken, not the end, where people will have to try and work
// it out themselves.
//
int startLine = $line;
int offset = getCharPositionInLine();
}
: // Eat the first character only, then see if we have a comment
  // or something silly.
  //
  '/' // Comment introducer

(
  // Single line comment, possibly with embedded src/line directives
  // in a similar style to the C pre-processor, allowing generated
  // code to refer the programmer back to the original source code
  // in case of error.
  //
  '/'
  (
    (' $ANTLR')=> ' $ANTLR' SRC
    | ~(NLCHARS)*
  )

| // Multi-line comment, which may be a documentation comment
  // if it starts /** (note that we protect against accidentally
  // recognizing a comment /**/ as a documentation comment
  //
  /** (
    { input.LA(2) != '/' }?=> '*' { $type = DOC_COMMENT; }
    | { true }?=> // Required to cover all alts with predicates
  )
)

```

```

// Should we support embedded multiline comments here?
//
(
  // Pick out end of multiline comment and exit the loop
  // if we find it.
  //
  { !(input.LA(1) == '*' && input.LA(2) == '/') }?

  // Anything else other than the non-greedy match of
  // the comment close sequence
  //
  .
)*
(
  // Look for the comment terminator, but if it is accidentally
  // unterminated, then we will hit EOF, which will trigger the
  // epsilon alt and hence we can issue an error message relative
  // to the start of the unterminated multi-line comment
  //
  /*'

|// Unterminated comment!
//
{
  // ErrorManager.msg(Msg.UNTERMINATED_DOC_COMMENT, startLine, offset, $pos, startLine,
offset, $pos, (Object)null);
}
)

|// There was nothing that made sense following the opening '/' and so
// we issue an error regarding the malformed comment
//
{
  // TODO: Insert error message relative to comment start
  //
}
)
{
  // We do not wish to pass the comments in to the parser. If you are
  // writing a formatter then you will want to preserve the comments off
  // channel, but could just skip and save token space if not.
  //
  $channel=COMMENTS_CHANNEL;
}
;

```

ARG\_OR\_CHARSET

```

options {k=1;}
: {isLexerRule}?=> LEXER_CHAR_SET {$type=LEXER_CHAR_SET;}
| {!isLexerRule}?=> ARG_ACTION
  {
  $type=ARG_ACTION;
  // Set the token text to our gathered string minus outer [ ]
  String t = $text;
  t = t.substring(1,t.length()-1);
  setText(t);
  }
;

```

```

fragment
LEXER_CHAR_SET

```

```

: '['
  ('\w ~(\r|\n)
  | ~(\r|\n|\\|'])
  )*
  ']'
;

```

```

// -----
// Argument specs
//
// Certain argument lists, such as those specifying call parameters
// to a rule invocation, or input parameters to a rule specification
// are contained within square brackets. In the lexer we consume them
// all at once and sort them out later in the grammar analysis.
//

```

```

fragment

```

```

ARG_ACTION
: '['
  (
    ARG_ACTION

    | ("")=>ACTION_STRING_LITERAL

    | ("\")=>ACTION_CHAR_LITERAL

    | ~('[|'])
  )*
  ']'
;

```

```

// -----
// Actions
//

```

```

// Other than making sure to distinguish between { and } embedded
// within what we have assumed to be literals in the action code, the
// job of the lexer is merely to gather the code within the action
// (delimited by {}) and pass it to the parser as a single token.
// We know that this token will be asked for its text somewhere
// in the upcoming parse, so setting the text here to exclude
// the delimiting {} is no additional overhead.
//
ACTION
: NESTED_ACTION
( '?' {$type = SEMPRED;}
( (WSNLCHARS* '=>') => WSNLCHARS* '=>' // v3 gated sempred
{
Token t = new CommonToken(input, state.type, state.channel, state.tokenStartCharIndex, getCharIndex()-1);
t.setLine(state.tokenStartLine);
t.setText(state.text);
t.setCharPositionInLine(state.tokenStartCharPositionInLine);
grammarError(ErrorType.V3_GATED_SEMPRED, t);
}
)?
)?
;

// -----
// Action structure
//
// Many language targets use {} as block delimiters and so we
// must recursively match {} delimited blocks to balance the
// braces. Additionally, we must make some assumptions about
// literal string representation in the target language. We assume
// that they are delimited by ' or " and so consume these
// in their own alts so as not to inadvertently match {}.
// This rule calls itself on matching a {
//
fragment
NESTED_ACTION
@init {

// Record the start line and offsets as if we need to report an
// unterminated block, then we want to show the start of the comment
// we think is broken, not the end, where people will have to try and work
// it out themselves.
//
int startLine = getLine();
int offset = getCharPositionInLine();
}

: // Action and other blocks start with opening {

```

```

//
'{'
(
// And now we can match one of a number of embedded
// elements within the action until we find a
// } that balances the opening {. If we do not find
// the balanced } then we will hit EOF and can issue
// an error message about the brace that we believe to
// be mismatched. This won't be foolproof but we will
// be able to at least report an error against the
// opening brace that we feel is in error and this will
// guide the user to the correction as best we can.
//

// An embedded {} block
//
NESTED_ACTION

|// What appears to be a literal
//
ACTION_CHAR_LITERAL

|// We have assumed that the target language has C/Java
// type comments.
//
COMMENT

|// What appears to be a literal
//
ACTION_STRING_LITERAL

|// What appears to be an escape sequence
//
ACTION_ESC

|// Some other single character that is not
// handled above
//
~(\\|\"|\'|/|{|})

)*

(
// Correctly balanced closing brace
//
}'

```

```

| // Looks like have an imbalanced {} block, report
  // with respect to the opening brace.
  //
  {
    // TODO: Report imbalanced {}
    System.out.println("Block starting at line " + startLine + " offset " + (offset+1) + " contains imbalanced {} or
is missing a }");
  }
)
;

```

```

// Keywords
// -----
// keywords used to specify ANTLR v3 grammars. Keywords may not be used as
// labels for rules or in any other context where they would be ambiguous
// with the keyword vs some other identifier
// OPTIONS, TOKENS, and CHANNELS must also consume the opening brace that captures
// their option block, as this is the easiest way to parse it separate
// to an ACTION block, despite it using the same {} delimiters.
//
OPTIONS   : 'options' WSNLCHARS* '{' ;
TOKENS_SPEC : 'tokens' WSNLCHARS* '{' ;
CHANNELS   : 'channels' WSNLCHARS* '{' ;

```

```

IMPORT     : 'import'           ;
FRAGMENT   : 'fragment'        ;
LEXER      : 'lexer'           ;
PARSER     : 'parser'          ;
GRAMMAR    : 'grammar'         ;
TREE_GRAMMAR : 'tree' WSNLCHARS* 'grammar' ;
PROTECTED  : 'protected'       ;
PUBLIC     : 'public'          ;
PRIVATE    : 'private'         ;
RETURNS    : 'returns'         ;
LOCALS     : 'locals'          ;
THROWS     : 'throws'          ;
CATCH      : 'catch'           ;
FINALLY    : 'finally'         ;
MODE       : 'mode'            ;

```

```

// -----
// Punctuation
//
// Character sequences used as separators, delimiters, operators, etc
//
COLON      : ':'
          {

```

```

// scan backwards, looking for a RULE_REF or TOKEN_REF.
// which would indicate the start of a rule definition.
// If we see a LPAREN, then it's the start of the subrule.
// this.tokens is the token string we are pushing into, so
// just loop backwards looking for a rule definition. Then
// we set isLexerRule.
Token t = getRuleOrSubruleStartToken();
if ( t!=null ) {
    if ( t.getType()==RULE_REF ) isLexerRule = false;
    else if ( t.getType()==TOKEN_REF ) isLexerRule = true;
    // else must be subrule; don't alter context
}
}
;

COLONCOLON  : '::'      ;
COMMA      : ','      ;
SEMI       : ';'      ;
LPAREN     : '('      ;
RPAREN     : ')'      ;
RARROW     : '->'    ;
LT         : '<'      ;
GT         : '>'      ;
ASSIGN     : '='      ;
QUESTION   : '?'      ;
SYNPRED    : '=>'    ;
{
    Token t = new CommonToken(input, state.type, state.channel,
        state.tokenStartCharIndex, getCharIndex()-1);
    t.setLine(state.tokenStartLine);
    t.setText(state.text);
    t.setCharPositionInLine(state.tokenStartCharPositionInLine);
    grammarError(ErrorType.V3_SYNPRED, t);
    $channel=HIDDEN;
}
;

STAR       : '*'      ;
PLUS       : '+'      ;
PLUS_ASSIGN : '+='    ;
OR         : '|'      ;
DOLLAR     : '$'      ;
DOT        : '.'      ; // can be WILDCARD or DOT in qid or imported rule ref
RANGE     : '..'     ;
AT         : '@'      ;
POUND     : '#'      ;
NOT       : '~'      ;
RBRACE    : '}'      ;

/** Allow unicode rule/token names */

```

```

ID : a=NameStartChar NameChar*
{
  if ( Grammar.isTokenName($a.text) ) $type = TOKEN_REF;
  else $type = RULE_REF;
}
;

```

fragment

```

NameChar : NameStartChar
  | '0'..'9'
  | '_'
  | '\u00B7'
  | '\u0300'..\u036F'
  | '\u203F'..\u2040'
;

```

fragment

```

NameStartChar
  : 'A'..'Z' | 'a'..'z'
  | '\u00C0'..\u00D6'
  | '\u00D8'..\u00F6'
  | '\u00F8'..\u02FF'
  | '\u0370'..\u037D'
  | '\u037F'..\u1FFF'
  | '\u200C'..\u200D'
  | '\u2070'..\u218F'
  | '\u2C00'..\u2FEF'
  | '\u3001'..\uD7FF'
  | '\uF900'..\uFDCF'
  | '\uFDF0'..\uFEFE'
  | '\uFF00'..\uFFFD'
  ; // ignores | [\u10000-\uEFFFF] ;

```

// -----

// Literals embedded in actions

//

// Note that we have made the assumption that the language used within

// actions uses the fairly standard " and ' delimiters for literals and

// that within these literals, characters are escaped using the \ character.

// There are some languages which do not conform to this in all cases, such

// as by using /string/ and so on. We will have to deal with such cases if

// if they come up in targets.

//

// Within actions, or other structures that are not part of the ANTLR

// syntax, we may encounter literal characters. Within these, we do

// not want to inadvertently match things like '}' and so we eat them

// specifically. While this rule is called CHAR it allows for the fact that

```

// some languages may use/allow ' as the string delimiter.
//
fragment
ACTION_CHAR_LITERAL
: "\"" ((\\)=>ACTION_ESC | ~\" )* "\""
;

// Within actions, or other structures that are not part of the ANTLR
// syntax, we may encounter literal strings. Within these, we do
// not want to inadvertently match things like '}' and so we eat them
// specifically.
//
fragment
ACTION_STRING_LITERAL
: "\"" ((\\)=>ACTION_ESC | ~\" )* "\""
;

// Within literal strings and characters that are not part of the ANTLR
// syntax, we must allow for escaped character sequences so that we do not
// inadvertently recognize the end of a string or character when the terminating
// delimiter has been escaped.
//
fragment
ACTION_ESC
: "\\" .
;

// -----
// Integer
//
// Obviously (I hope) match an arbitrary long sequence of digits.
//
INT : ('0'..'9')+
;

// -----
// Source spec
//
// A fragment rule for picking up information about an originating
// file from which the grammar we are parsing has been generated. This allows
// ANTLR to report errors against the originating file and not the generated
// file.
//
fragment
SRC : 'src' WSCHARS+ file=ACTION_STRING_LITERAL WSCHARS+ line=INT
{
    // TODO: Add target specific code to change the source file name and current line number
}
//

```

```

    }
    ;

// -----
// Literal string
//
// ANTLR makes no distinction between a single character literal and a
// multi-character string. All literals are single quote delimited and
// may contain unicode escape sequences of the form \uxxxx or \u{xxxxxx},
// where x is a valid hexadecimal number.
STRING_LITERAL
: "\"" ( ( ESC_SEQ | ~("\\"|\\"|\r|\n) ) ) *
  ( "\""
  | // Unterminated string literal
    {
      Token t = new CommonToken(input, state.type, state.channel, state.tokenStartCharIndex, getCharIndex()-1);
      t.setLine(state.tokenStartLine);
      t.setText(state.text);
      t.setCharPositionInLine(state.tokenStartCharPositionInLine);
      grammarError(ErrorType.UNTERMINATED_STRING_LITERAL, t);
    }
  )
;

// A valid hex digit specification
//
fragment
HEX_DIGIT : ('0'..'9'|'a'..'f'|'A'..'F') ;

// Any kind of escaped character that we can embed within ANTLR
// literal strings.
//
fragment
ESC_SEQ
: "\"
  (
    // The standard escaped character set such as tab, newline, etc...
    'b'|'t'|'n'|'f'|'r'|\"|'\\'

    | // A Java style Unicode escape sequence
    UNICODE_ESC

    | // A Swift/Hack style Unicode escape sequence
    UNICODE_EXTENDED_ESC

    | // An illegal escape sequence
    ~('b'|'t'|'n'|'f'|'r'|\"|'\\'|'u') // \x for any invalid x (make sure to match char here)
    {

```

```

    Token t = new CommonToken(input, state.type, state.channel, getCharIndex()-2, getCharIndex()-1);
    t.setText(t.getText());
    t.setLine(input.getLine());
    t.setCharPositionInLine(input.getCharPositionInLine()-2);
    grammarError(ErrorType.INVALID_ESCAPE_SEQUENCE, t, input.substring(getCharIndex()-
2,getCharIndex()-1));
    }
)
;

```

fragment

UNICODE\_ESC

@init {

// Flag to tell us whether we have a valid number of

// hex digits in the escape sequence

//

int hCount = 0;

}

: 'u' // Leadin for unicode escape sequence

// We now require 4 hex digits. Note though

// that we accept any number of characters

// and issue an error if we do not get 4. We cannot

// use an infinite count such as + because this

// might consume too many, so we lay out the lexical

// options and issue an error at the invalid paths.

//

(

(

HEX\_DIGIT { hCount++; }

(

HEX\_DIGIT { hCount++; }

(

HEX\_DIGIT { hCount++; }

(

// Four valid hex digits, we are good

//

HEX\_DIGIT { hCount++; }

| // Three valid digits

)

| // Two valid digits

)

| // One valid digit

)

```

    )
    | // No valid hex digits at all
)

// Now check the digit count and issue an error if we need to
//
{
    if (hCount < 4) {
        Interval badRange = Interval.of(getCharIndex()-2-hCount, getCharIndex());
        String lastChar = input.substring(badRange.b, badRange.b);
        if ( lastChar.codePointAt(0)=='\') {
            badRange.b--;
        }
        String bad = input.substring(badRange.a, badRange.b);
        Token t = new CommonToken(input, state.type, state.channel, badRange.a, badRange.b);
        t.setLine(input.getLine());
        t.setCharPositionInLine(input.getCharPositionInLine()-hCount-2);
        grammarError(ErrorType.INVALID_ESCAPE_SEQUENCE, t, bad);
    }
}
;

fragment
UNICODE_EXTENDED_ESC
: 'u{' // Leadin for unicode extended escape sequence

    HEX_DIGIT+ // One or more hexadecimal digits

    '}' // Leadout for unicode extended escape sequence

// Now check the digit count and issue an error if we need to
{
    int numDigits = getCharIndex()-state.tokenStartCharIndex-6;
    if (numDigits > 6) {
        Token t = new CommonToken(input, state.type, state.channel, state.tokenStartCharIndex, getCharIndex()-
1);
        t.setText(t.getText());
        t.setLine(input.getLine());
        t.setCharPositionInLine(input.getCharPositionInLine()-numDigits);
        grammarError(ErrorType.INVALID_ESCAPE_SEQUENCE, t,
input.substring(state.tokenStartCharIndex,getCharIndex()-1));
    }
}
;

// -----
// Whitespace
//

```

```

// Characters and character constructs that are of no import
// to the parser and are used to make the grammar easier to read
// for humans.
//
WS
: (
  ''
  | '\t'
  | '\r'
  | '\n'
  | '\f'
)+
  {$channel=HIDDEN;}
;

// A fragment rule for use in recognizing end of line in
// rules like COMMENT.
//
fragment
NLCHARS
: '\n' | '\r'
;

// A fragment rule for recognizing traditional whitespace
// characters within lexer rules.
//
fragment
WSCHARS
: ' ' | '\t' | '\f'
;

// A fragment rule for recognizing both traditional whitespace and
// end of line markers, when we don't care to distinguish but don't
// want any action code going on.
//
fragment
WSNLCHARS
: ' ' | '\t' | '\f' | '\n' | '\r'
;

// This rule allows ANTLR 4 to parse grammars using the UTF-8 encoding with a
// byte order mark. Since this Unicode character doesn't appear as a token
// anywhere else in the grammar, we can simply skip all instances of it without
// problem. This rule will not break usage of \uFEFF inside a LEXER_CHAR_SET or
// STRING_LITERAL.
UnicodeBOM
: '\uFEFF' {skip();}
;

```

```

// -----
// Illegal Character
//
// This is an illegal character trap which is always the last rule in the
// lexer specification. It matches a single character of any value and being
// the last rule in the file will match when no other rule knows what to do
// about the character. It is reported as an error but is not passed on to the
// parser. This means that the parser to deal with the grammar file anyway
// but we will not try to analyse or code generate from a file with lexical
// errors.
//
ERRCHAR
: .
{
    Token t = new CommonToken(input, state.type, state.channel, state.tokenStartCharIndex, getCharIndex()-1);
    t.setLine(state.tokenStartLine);
    t.setText(state.text);
    t.setCharPositionInLine(state.tokenStartCharPositionInLine);
    String msg = getTokenErrorDisplay(t) + " came as a complete surprise to me";
    grammarError(ErrorType.SYNTAX_ERROR, t, msg);
    state.syntaxErrors++;
    skip();
}
;

```

Found in path(s):

\* /opt/cola/permits/1300428068\_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/ANTLRLexer.g

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```

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*/

```

```
lexer grammar ActionSplitter;
```

```
options { filter=true; }
```

```
@header {
```

```
package org.antlr.v4.parse;
import org.antlr.v4.tool.*;
import org.antlr.v4.tool.ast.*;
}
```

```
@members {
```

```
ActionSplitterListener delegate;
```

```
public ActionSplitter(CharStream input, ActionSplitterListener delegate) {
    this(input, new RecognizerSharedState());
    this.delegate = delegate;
}
```

```
/** force filtering (and return tokens). triggers all above actions. */
```

```
public List<Token> getActionTokens() {
    List<Token> chunks = new ArrayList<Token>();
    Token t = nextToken();
    while ( t.getType()!=Token.EOF ) {
        chunks.add(t);
        t = nextToken();
    }
    return chunks;
}
```

```
private boolean isIDStartChar(int c) {
    return c == '_' || Character.isLetter(c);
}
}
```

```
// ignore comments right away
```

## COMMENT

```
: /*' ( options {greedy=false;} : . )* */' {delegate.text($text);}
;
```

## LINE\_COMMENT

```
: /*' ~(\n|\r)* \r? \n' {delegate.text($text);}
;
```

## SET\_NONLOCAL\_ATTR

```
:'$ x=ID ':' y=ID WS? '=' expr=ATTR_VALUE_EXPR ':'
{
  delegate.setNonLocalAttr($text, $x, $y, $expr);
}
;
```

## NONLOCAL\_ATTR

```
:'$ x=ID ':' y=ID {delegate.nonLocalAttr($text, $x, $y);}
;
```

## QUALIFIED\_ATTR

```
:'$ x=ID '!' y=ID {input.LA(1)!='('}? {delegate.qualifiedAttr($text, $x, $y);}
;
```

## SET\_ATTR

```
:'$ x=ID WS? '=' expr=ATTR_VALUE_EXPR ':'
{
  delegate.setAttr($text, $x, $expr);
}
;
```

## ATTR

```
:'$ x=ID {delegate.attr($text, $x);}
;
```

// Anything else is just random text

## TEXT

```
@init {StringBuilder buf = new StringBuilder();}
@after {delegate.text(buf.toString());}
: ( c~(\\| '$) {buf.append((char)$c);}
  | \\$' {buf.append('$);}
  | \\' c~('$) {buf.append('\\').append((char)$c);}
  | {!isIDStartChar(input.LA(2))}? => '$' {buf.append('$);}
)+
;
```

## fragment

```
ID : ('a..'z'|'A..'Z'|'_') ('a..'z'|'A..'Z'|'0'..'9'|'_')*
;
```

```
/** Don't allow an = as first char to prevent $x == 3; kind of stuff. */
```

```
fragment
```

```
ATTR_VALUE_EXPR
```

```
: ~'= '(~';)*
```

```
;
```

```
fragment
```

```
WS : ( '\t'|\n'|\r')+;
```

Found in path(s):

```
* /opt/cola/permits/1300428068_1649144266.79/0/antlr4-4-9-2-sources-jar/org/antlr/v4/parse/ActionSplitter.g
```

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```
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```

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```
*/
```

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```

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# 1.7 bean-validation-api 2.0.2

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## 1.8 feign-httpclient 8.18.0

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```
* /opt/cola/permits/1274702072_1645234420.76/0/feign-httpclient-8-18-0-sources-  
jar/feign/httpclient/HttpClient.java
```

# 1.9 jdbi-sqlobject 3.27.2

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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/META-INF/maven/org.jdbi/jdbi3-sqlobject/pom.xml

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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/statement/SqlCall.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/statement/internal/SqlUpdateHandler.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/customizer/internal/BindListFactory.java  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/config/RegisterColumnMapper.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/statement/MapTo.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/config/internal/RegisterColumnMappersImpl.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/locator/internal/UseAnnotationSqlLocatorImpl.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/config/UseSqlParser.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-jar/org/jdbi/v3/sqlobject/config/internal/RegisterObjectArgumentFactoryImpl.java  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-

jar/org/jdbi/v3/sqlobject/config/internal/RegisterBeanMappersImpl.java  
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jar/org/jdbi/v3/sqlobject/customizer/AllowUnusedBindings.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/transaction/Transactional.java  
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jar/org/jdbi/v3/sqlobject/locator/UseClasspathSqlLocator.java  
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jar/org/jdbi/v3/sqlobject/statement/SqlScript.java  
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jar/org/jdbi/v3/sqlobject/statement/SqlBatch.java  
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jar/org/jdbi/v3/sqlobject/WithHandleMethodHandlerFactory.java  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/config/internal/RegisterJoinRowMapperImpl.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/customizer/BindBean.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/customizer/BindMethodsList.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/config/ConfiguringAnnotation.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/customizer/internal/BindPojoFactory.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/config/Configurer.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/config/RegisterColumnMapperFactories.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/config/RegisterRowMappers.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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jar/org/jdbi/v3/sqlobject/config/internal/RegisterColumnMapperFactoriesImpl.java  
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jar/org/jdbi/v3/sqlobject/customizer/internal/DefineFactory.java  
\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
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\* /opt/cola/permits/1341639716\_1654808696.7607806/0/jdbi3-sqlobject-3-27-2-sources-  
jar/org/jdbi/v3/sqlobject/transaction/TransactionalConsumer.java

# 1.10 micronaut-serialization 1.0.1

## 1.10.1 Available under license :

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Found in path(s):

```
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/util/CustomizableSerializer.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/util/CustomizableDeserializer.java
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* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
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jar/io/micronaut/serde/util/NullableSerde.java  
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\* /opt/cola/permits/1331474218\_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-  
jar/io/micronaut/serde/util/NullableDeserializer.java  
\* /opt/cola/permits/1331474218\_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-

```
jar/io/micronaut/serde/config/naming/LowerCaseStrategy.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/exceptions/InvalidFormatException.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/config/naming/LowerCamelCaseStrategy.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/UpdatingDeserializer.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/config/naming/UpperCamelCaseStrategy.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/reference/PropertyReference.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/config/naming/IdentityStrategy.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/Serializer.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/reference/SerializationReference.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/config/SerializationConfiguration.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/annotation/Serdeable.java
* /opt/cola/permits/1331474218_1653513142.445036/0/micronaut-serde-api-1-0-1-sources-
jar/io/micronaut/serde/reference/PropertyReferenceManager.java
```

## 1.11 kafka-schema-serializer 5.5.5

### 1.11.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
<project xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://maven.apache.org/POM/4.0.0"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">

  <modelVersion>4.0.0</modelVersion>

  <parent>
    <groupId>io.confluent</groupId>
    <artifactId>kafka-schema-registry-parent</artifactId>
    <version>5.5.5</version>
  </parent>

  <licenses>
    <license>
      <name>Apache License 2.0</name>
      <url>http://www.apache.org/licenses/LICENSE-2.0.html</url>
      <distribution>repo</distribution>
    </license>
```

```

</licenses>

<artifactId>kafka-schema-serializer</artifactId>
<packaging>jar</packaging>
<name>kafka-schema-serializer</name>

<dependencies>
  <dependency>
    <groupId>org.apache.kafka</groupId>
    <artifactId>kafka_${kafka.scala.version}</artifactId>
    <scope>provided</scope>
  </dependency>
  <dependency>
    <groupId>io.confluent</groupId>
    <artifactId>kafka-schema-registry-client</artifactId>
  </dependency>
  <dependency>
    <groupId>io.confluent</groupId>
    <artifactId>common-config</artifactId>
  </dependency>

  <dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <scope>test</scope>
  </dependency>
</dependencies>
</project>

```

Found in path(s):

```

* /opt/cola/permits/1341639782_1654785878.0524044/0/kafka-schema-serializer-5-5-5-jar/META-INF/maven/io.confluent/kafka-schema-serializer/pom.xml

```

## 1.12 jackson-module-parameter-names 2.13.3

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## 1.13 java-servlet-api 4.0.1

### 1.13.1 Available under license :

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## 1.14 metrics---dropwizard v4.0.5

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Manifest-Version: 1.0

Bnd-LastModified: 1545937975057  
Build-Jdk: 1.8.0\_191  
Built-By: artem  
Bundle-Description: An Apache HttpClient wrapper providing Metrics instrumentation of connection pools, request durations and rates, and other useful information.  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: Metrics Integration for Apache HttpClient  
Bundle-SymbolicName: io.dropwizard.metrics.httpclient  
Bundle-Version: 4.0.5  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.httpclient;uses:="com.codahale.metrics,org.apache.http,org.apache.http.config,org.apache.http.conn,org.apache.http.conn.routing,org.apache.http.conn.socket,org.apache.http.impl.client,org.apache.http.impl.conn,org.apache.http.protocol";version="4.0.5"  
Implementation-Title: Metrics Integration for Apache HttpClient  
Implementation-URL: <http://metrics.dropwizard.io/metrics-httpclient>  
Implementation-Vendor-Id: io.dropwizard.metrics  
Implementation-Version: 4.0.5  
Import-Package: com.codahale.metrics;version="[4.0,5)",org.apache.http,org.apache.http.client,org.apache.http.client.methods,org.apache.http.client.utils,org.apache.http.config,org.apache.http.conn,org.apache.http.conn.routing,org.apache.http.conn.socket,org.apache.http.conn.ssl,org.apache.http.impl.client,org.apache.http.impl.conn,org.apache.http.pool,org.apache.http.protocol  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1274705442\_1648835835.08/0/metrics-httpclient-4-0-5-jar/META-INF/MANIFEST.MF

## 1.15 slf4j-api-module 1.7.26

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## 1.16 annotations-for-metrics 4.1.29

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Manifest-Version: 1.0  
Automatic-Module-Name: com.codahale.metrics.annotation  
Build-Jdk-Spec: 1.8  
Bundle-Description: A dependency-less package of just the annotations used by other Metrics modules.  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: Annotations for Metrics  
Bundle-SymbolicName: io.dropwizard.metrics.annotation  
Bundle-Version: 4.1.29  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.annotation;version="4.1.29"  
Implementation-Title: Annotations for Metrics  
Implementation-Version: 4.1.29  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473592011\_1668796806.4841948/0/metrics-annotation-4-1-29-jar/META-INF/MANIFEST.MF

## 1.17 google-guice 4.2.2

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```
* /opt/cola/permits/1340816289_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/META-INF/maven/io.cloudevents/cloudevents-kafka/pom.xml
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- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/CloudEventMessageDeserializer.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/CloudEventMessageSerializer.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/CloudEventSerializer.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/CloudEventDeserializer.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/impl/KafkaBinaryMessageReaderImpl.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/impl/KafkaProducerMessageWriterImpl.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/KafkaMessageFactory.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/impl/KafkaHeaders.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/impl/KafkaSerializerMessageWriterImpl.java
- \* /opt/cola/permits/1340816289\_1654861242.1326292/0/cloudevents-kafka-2-2-0-sources-jar/io/cloudevents/kafka/impl/BaseKafkaMessageWriterImpl.java

# 1.20 apache-commons-text 1.10.0

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## 1.21 javax.inject:javax.inject 1

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```

Found in path(s):

```
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Provider.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Named.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Qualifier.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Inject.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/package-info.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Scope.java
* /opt/cola/permits/1299411403_1650627395.55/0/javax-inject-1-sources-jar/javax/inject/Singleton.java
```

## 1.22 docker-java 3.2.12

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```

\*/

Found in path(s):

\* /opt/cola/permits/1331473523\_1653068661.0567706/0/docker-java-api-3-2-12-sources-jar/com/github/dockerjava/api/model/HealthCheck.java

## 1.23 google-gson 2.9.0

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Found in path(s):

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/FlywayMigrator.java

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\*/

Found in path(s):

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/GormMigrationRunner.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/endpoint/FlywayEndpoint.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/DataSourceMigrationRunner.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/event/SchemaCleanedEvent.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/graalvm/FeatureDetectorSubstitutions.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/endpoint/FlywayReport.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/AbstractFlywayMigration.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/event/MigrationFinishedEvent.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/graalvm/FlywayFeature.java

\* /opt/cola/permits/1331473697\_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-jar/io/micronaut/flyway/graalvm/ScannerSubstitutions.java

```
* /opt/cola/permits/1331473697_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-
jar/io/micronaut/flyway/package-info.java
* /opt/cola/permits/1331473697_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-
jar/io/micronaut/flyway/FlywayConfigurationProperties.java
* /opt/cola/permits/1331473697_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-
jar/io/micronaut/flyway/graalvm/MicronautPathLocationScanner.java
* /opt/cola/permits/1331473697_1653068637.3698914/0/micronaut-flyway-5-2-0-sources-
jar/io/micronaut/flyway/AlternativeMigrationRunner.java
```

## 1.25 cloudevents---core 2.2.0

### 1.25.1 Available under license :

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-->
```

Found in path(s):

```
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/META-
INF/maven/io.cloudevents/cloudevents-core/pom.xml
```

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```
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```

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- \*
- \*/

Found in path(s):

- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v03/CloudEventBuilder.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v1/V03ToV1AttributesConverter.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/impl/CloudEventContextReaderAdapter.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v1/CloudEventBuilder.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/CloudEventUtils.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/builder/CloudEventBuilder.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/extensions/impl/ExtensionUtils.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/message/StructuredMessageReader.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v03/V1ToV03AttributesConverter.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/message/impl/GenericStructuredMessageReader.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/provider/EventFormatProvider.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/provider/ExtensionProvider.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/message/impl/BaseGenericBinaryMessageReaderImpl.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/message/Encoding.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v1/CloudEventV1.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/message/MessageReader.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/format/EventFormat.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/v03/CloudEventV03.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/impl/BaseCloudEventBuilder.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-jar/io/cloudevents/core/extensions/DaterefExtension.java
- \* /opt/cola/permits/1340815883\_1654861257.1698394/0/cloudevents-core-2-2-0-sources-

```
jar/io/cloudevents/core/message/MessageWriter.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/format/EventDeserializationException.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/message/impl/BaseStructuredMessageReader.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/impl/CloudEventReaderAdapter.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/format/EventSerializationException.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/extensions/DistributedTracingExtension.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/message/impl/MessageUtils.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/message/impl/BaseBinaryMessageReader.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/message/StructuredMessageWriter.java
* /opt/cola/permits/1340815883_1654861257.1698394/0/cloudevents-core-2-2-0-sources-
jar/io/cloudevents/core/impl/BaseCloudEvent.java
```

## 1.26 netty-tomcatnative-openssl-dynamic

### 2.0.48.Final

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```
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```

Found in path(s):

```
* /opt/cola/permits/1473561893_1669090143.9916968/0/netty-tcnative-2-0-48-final-jar/META-
INF/maven/io.netty/netty-tcnative/pom.xml
```

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/TomcatNative [OpenSSL - Dynamic]  
Bundle-Description: A Mavenized fork of Tomcat Native which incorporates various patches. This artifact is dynamically linked to OpenSSL and Apache APR.  
Automatic-Module-Name: io.netty.internal.tcnative  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.txt>  
Bundle-SymbolicName: io.netty.tcnative  
Implementation-Version: 2.0.48.Final  
Built-By: norman  
Bnd-LastModified: 1643124869520  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Fragment-Host: io.netty.tcnative-classes  
Tool: Bnd-5.1.1.202006162103  
Bundle-Name: Netty/TomcatNative [OpenSSL - Dynamic]  
Bundle-Version: 2.0.48.Final  
Build-Jdk-Spec: 1.8  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://github.com/netty/netty-tcnative/netty-tcnative/>

Found in path(s):

\* /opt/cola/permits/1473561893\_1669090143.9916968/0/netty-tcnative-2-0-48-final-jar/META-INF/MANIFEST.MF

## 1.27 micronaut 3.4.3

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Found in path(s):

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/clhm/package-info.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/clhm/EntryWeigher.java

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Found in path(s):

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/clhm/LinkedDeque.java

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Found in path(s):

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/beans/UnsafeBeanProperty.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/convert/ImmutableArgumentConversionContext.java  
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Found in path(s):

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/io/scan/ClassPathResourceLoader.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/io/buffer/ReferenceCounted.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/convert/format/ReadableBytesTypeConverter.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/bind/BoundExecutable.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/KotlinUtils.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/locale/LocaleResolutionConfiguration.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/serialize/package-info.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/convert/format/MapFormat.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/cli/package-info.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/beans/AbstractBeanIntrospectionReference.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/annotation/Indexed.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/io/buffer/ByteBuffer.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-

jar/io/micronaut/core/serialize/ObjectSerializer.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/value/MutableConvertibleValuesMap.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/value/OptionalMultiValues.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/Internal.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/service/DefaultServiceDefinition.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/value/ConvertibleValuesMap.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/ResourceLoader.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/util/Toggleable.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/reflect/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/order/OrderUtil.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/naming/NameResolver.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/value/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/scan/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/Order.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/AnnotationValueResolver.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/format/Format.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/exceptions/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/value/MapPropertyResolver.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/buffer/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/naming/NameUtils.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/scan/DefaultClassPathResourceLoader.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/bind/annotation/AnnotatedArgumentBinder.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/service/ServiceDefinition.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/Headers.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-

jar/io/micronaut/core/version/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/MutableArgumentValue.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/value/MutableConvertibleMultiValues.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/bind/ExecutableBinder.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/service/StreamSoftServiceLoader.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/AnnotatedTypeInfo.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/Argument.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/beans/AbstractBeanProperty.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/IOUtils.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/value/ConvertibleMultiValues.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/bind/DefaultExecutableBinder.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/bind/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/cli/exceptions/ParseException.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/order/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/util/PathMatcher.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/file/DefaultFileSystemResourceLoader.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/ArgumentConversionContext.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/socket/SocketUtils.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/AnnotationClassValue.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/Readable.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/ErrorsContext.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-

jar/io/micronaut/core/convert/ConversionService.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/naming/Named.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/ReturnType.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/GenericArgument.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/io/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/ConversionContext.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/value/ValueException.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/MutableHeaders.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/serialize/JdkSerializer.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/ImmutableSortedStringsArrayMap.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/Blocking.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/AnnotationMetadata.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/DefaultConversionService.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/naming/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/ArgumentValue.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/package-info.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/exceptions/ExceptionHandler.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/serialize/exceptions/SerializationException.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/util/StreamUtils.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/exceptions/BeanExceptionHandler.java

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jar/io/micronaut/core/util/clhm/Weighers.java
* /opt/cola/permits/1473577596_1668731859.9478781/0/micronaut-core-3-4-3-sources-
jar/io/micronaut/core/util/clhm/EvictionListener.java
* /opt/cola/permits/1473577596_1668731859.9478781/0/micronaut-core-3-4-3-sources-
jar/io/micronaut/core/util/clhm/ConcurrentLinkedHashMap.java
* /opt/cola/permits/1473577596_1668731859.9478781/0/micronaut-core-3-4-3-sources-
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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/META-INF/native-image/io.micronaut/micronaut-core/native-image.properties

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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/annotation/AccessorsStyle.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/type/DefaultGenericPlaceholder.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/io/scan/BeanIntrospectionScanner.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/annotation/Nullable.java

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\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/type/TypeInfoProvider.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/util/RegexPathMatcher.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/type/GenericPlaceholder.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-jar/io/micronaut/core/annotation/NonNull.java

\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-

jar/io/micronaut/core/optim/StaticOptimizations.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/type/ArgumentCoercible.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/util/EnvironmentProperties.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/convert/converters/MultiValuesConverterFactory.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/annotation/AnnotationValueProvider.java  
\* /opt/cola/permits/1473577596\_1668731859.9478781/0/micronaut-core-3-4-3-sources-  
jar/io/micronaut/core/beans/BeanConstructor.java

## 1.28 java-architecture-for-xml-binding 2.3.3

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Amendment II

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Amendment III

No soldier shall, in time of peace be quartered in any house, without the consent of the owner, nor in time of war, but in a manner to be prescribed by law.

Amendment IV

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Amendment V

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

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Streaming API for XML (JSR-173) Specification

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## 1.34 junit-jupiter-junit-jupiter-api 5.8.2

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## 1.36 logback-access-module 1.2.9

### 1.36.1 Available under license :

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-- This SQL script creates the required tables by ch.qos.logback.access.db.DBAppender

--

-- It is intended for Oracle databases.

```
CREATE SEQUENCE access_event_id_seq MINVALUE 1 START WITH 1;
```

```
CREATE TABLE access_event
```

```
(  
  timestmp      NUMBER(20) NOT NULL,  
  requestURI    VARCHAR(254),  
  requestURL    VARCHAR(254),  
  remoteHost    VARCHAR(254),  
  remoteUser    VARCHAR(254),  
  remoteAddr    VARCHAR(254),  
  protocol      VARCHAR(254),  
  method        VARCHAR(254),  
  serverName    VARCHAR(254),  
  postContent   VARCHAR(254),  
  event_id      NUMBER(20) PRIMARY KEY  
);
```

-- the / suffix may or may not be needed depending on your SQL Client

-- Some SQL Clients, e.g. Squirrel SQL has trouble with the following

-- trigger creation command, while SQLPlus (the basic SQL Client which

-- ships with Oracle) has no trouble at all.

```
CREATE TRIGGER access_event_id_seq_trig  
BEFORE INSERT ON access_event  
FOR EACH ROW  
BEGIN  
  SELECT access_event_id_seq.NEXTVAL  
  INTO :NEW.event_id
```

```
FROM DUAL;
END access_event_id_seq_trig;
/
```

```
CREATE TABLE access_event_header
(
  event_id    NUMBER(20) NOT NULL,
  header_key  VARCHAR2(254) NOT NULL,
  header_value VARCHAR2(1024),
  PRIMARY KEY(event_id, header_key),
  FOREIGN KEY (event_id) REFERENCES access_event(event_id)
);
```

Found in path(s):

```
* /opt/cola/permits/1473592185_1668797828.4076514/0/logback-access-1-2-9-
jar/ch/qos/logback/access/db/script/oracle.sql
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```

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```

```
# conditions.
```

```
# This SQL script creates the required tables by ch.qos.logback.classic.db.DBAppender
```

```
#
```

```
# It is intended for PostgreSQL databases.
```

```
DROP TABLE access_event_exception;
```

```
DROP SEQUENCE access_event_id_seq;
```

```
DROP TABLE access_event;
```

```
CREATE SEQUENCE access_event_id_seq MINVALUE 1 START 1;
```

```
CREATE TABLE access_event
```

```
(
  timestmp    BIGINT NOT NULL,
  requestURI  VARCHAR(254),
  requestURL  VARCHAR(254),
  remoteHost  VARCHAR(254),
  remoteUser  VARCHAR(254),
  remoteAddr  VARCHAR(254),
  protocol    VARCHAR(254),
  method      VARCHAR(254),
  serverName  VARCHAR(254),
  postContent VARCHAR(254),
  event_id    BIGINT DEFAULT nextval('access_event_id_seq') PRIMARY KEY
);
```

```
CREATE TABLE access_event_header
(
  event_id    BIGINT NOT NULL,
  header_key  VARCHAR(254) NOT NULL,
  header_value VARCHAR(1024),
  PRIMARY KEY(event_id, header_key),
  FOREIGN KEY (event_id) REFERENCES access_event(event_id)
);
```

Found in path(s):

```
* /opt/cola/permits/1473592185_1668797828.4076514/0/logback-access-1-2-9-
jar/ch/qos/logback/access/db/script/postgresql.sql
```

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Manifest-Version: 1.0

Bundle-Description: logback-access module

Bundle-License: <http://www.eclipse.org/legal/epl-v10.html>, <http://www.gnu.org/licenses/old-licenses/lgpl-2.1.html>

Bundle-SymbolicName: ch.qos.logback.access

Archiver-Version: Plexus Archiver

Built-By: ceki

Bnd-LastModified: 1639708609480

Bundle-ManifestVersion: 2

Bundle-RequiredExecutionEnvironment: JavaSE-1.6

Bundle-DocURL: <http://www.qos.ch>

Bundle-Vendor: QOS.ch

Import-Package: javax.servlet;version="2.5";resolution:=optional,javax.servlet.http;version="2.5";resolution:=optional,javax.management;resolution:=optional,org.apache.catalina;version="8.5.9";resolution:=optional,org.apache.catalina.connector;version="8.5.9";resolution:=optional,org.apache.catalina.valves;version="8.5.9";resolution:=optional,org.eclipse.jetty.http;version="8.2.0.v20160908";resolution:=optional,org.eclipse.jetty.server;version="8.2.0.v20160908";resolution:=optional,org.eclipse.jetty.util.component;version="8.2.0.v20160908";resolution:=optional,ch.qos.logback.core;version="[1.2,2)",ch.qos.logback.core.boolex;version="[1.2,2)",ch.qos.logback.core.filter;version="[1.2,2)",ch.qos.logback.core.helpers;version="[1.2,2)",ch.qos.logback.core.html;version="[1.2,2)",ch.qos.logback.core.joran;version="[1.2,2)",ch.qos.logback.core.joran.action;version="[1.2,2)",ch.qos.logback.core.joran.conditional;version="[1.2,2)",ch.qos.logback.core.joran.event;version="[1.2,2)",ch.qos.logback.core.joran.spi;version="[1.2,2)",ch.qos.logback.core.net;version="[1.2,2)",ch.qos.logback.core.net.server;version="[1.2,2)",ch.qos.logback.core.net.ssl;version="[1.2,2)",ch.qos.logback.core.pattern;version="[1.2,2)",ch.qos.logback.core.pattern.color;version="[1.2,2)",ch.qos.logback.core.pattern.parser;version="[1.2,2)",ch.qos.logback.core.sift;version="[1.2,2)",ch.qos.logback.core.spi;version="[1.2,2)",ch.qos.logback.core.status;version="[1.2,2)"

,ch.qos.logback.core.util;version="[1.2,2)",org.apache.coyote;resolution:=optional,org.xml.sax,ch.qos.logback.core.rolling;version="[1.2,2)",ch.qos.logback.core.rolling.helper;version="[1.2,2)"  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Originally-Created-By: Apache Maven Bundle Plugin  
Export-Package: ch.qos.logback.access;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core.pattern,ch.qos.logback.core.status,javax.servlet.http",ch.qos.logback.access.boolex;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core.boolex",ch.qos.logback.access.db.script;version="1.2.9",ch.qos.logback.access.filter;version="1.2.9";uses="ch.qos.logback.core.filter,ch.qos.logback.core.spi",ch.qos.logback.access.html;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core.html",ch.qos.logback.access.jetty;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core,ch.qos.logback.core.filter,ch.qos.logback.core.spi,org.eclipse.jetty.server,org.eclipse.jetty.util.component",ch.qos.logback.access.joran;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core.joran,ch.qos.logback.core.joran.spi",ch.qos.logback.access.joran.action;version="1.2.9";uses="ch.qos.logback.core.joran.action,ch.qos.logback.core.joran.spi,org.xml.sax",ch.qos.logback.access.net;version="1.2.9";uses="ch.qos.logback.access,ch.qos.logback.access.spi,ch.qos.logback.core,ch.qos.logback.core.boolex,ch.qos.logback.core.helpers,ch.qos.logback.core.net,ch.qos.logback.core.pattern,ch.qos.logback.core.spi",ch.qos.logback.access.net.server;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core.net.server,ch.qos.logback.core.spi",ch.qos.logback.access.pattern;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core,ch.qos.logback.core.pattern,ch.qos.logback.core.spi,ch.qos.logback.core.status",ch.qos.logback.access.servlet;version="1.2.9";uses="javax.servlet,javax.servlet.http",ch.qos.logback.access.sift;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core,ch.qos.logback.core.joran.action,ch.qos.logback.core.joran.event,ch.qos.logback.core.joran.spi,ch.qos.logback.core.sift,org.xml.sax",ch.qos.logback.access.spi;version="1.2.9";uses="ch.qos.logback.core,ch.qos.logback.core.filter,ch.qos.logback.core.spi,javax.servlet.http",ch.qos.logback.access.tomcat;version="1.2.9";uses="ch.qos.logback.access.spi,ch.qos.logback.core,ch.qos.logback.core.filter,ch.qos.logback.core.spi,ch.qos.logback.core.status,javax.servlet,org.apache.catalina,org.apache.catalina.connector,org.apache.catalina.valves"

Bundle-Name: Logback Access Module  
Bundle-Version: 1.2.9  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_121

Found in path(s):

\* /opt/cola/permits/1473592185\_1668797828.4076514/0/logback-access-1-2-9-jar/META-INF/MANIFEST.MF

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```
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#
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```

```
# This SQL script creates the required tables by ch.qos.logback.access.db.DBAppender
#
# It is intended for IBM DB2 databases.
#
# WARNING WARNING WARNING WARNING
# =====
# This SQL script has not been tested on an actual DB2
# instance. It may contain errors or even invalid SQL
# statements.
```

```
DROP TABLE access_event_header;
DROP TABLE access_event;
```

```
CREATE TABLE access_event
(
  timestmp      BIGINT NOT NULL,
  requestURI    VARCHAR(254),
  requestURL    VARCHAR(254),
  remoteHost    VARCHAR(254),
  remoteUser    VARCHAR(254),
  remoteAddr    VARCHAR(254),
  protocol      VARCHAR(254),
  method        VARCHAR(254),
  serverName    VARCHAR(254),
  postContent   VARCHAR(254),
  event_id      INTEGER GENERATED ALWAYS AS IDENTITY (START WITH 1)
);
```

```
CREATE TABLE access_event_header
(
  event_id      INTEGER NOT NULL,
  header_key    VARCHAR(254) NOT NULL,
  header_value  VARCHAR(1024),
  PRIMARY KEY(event_id, header_key),
  FOREIGN KEY (event_id) REFERENCES access_event(event_id)
);
```

Found in path(s):

```
* /opt/cola/permits/1473592185_1668797828.4076514/0/logback-access-1-2-9-
jar/ch/qos/logback/access/db/script/db2.sql
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# This SQL script creates the required tables by ch.qos.logback.access.db.DBAppender

#

# It is intended for HSQL databases.

```
DROP TABLE access_event_header IF EXISTS;
```

```
DROP TABLE access_event IF EXISTS;
```

```
CREATE TABLE access_event (  
  timestmp BIGINT NOT NULL,  
  requestURI VARCHAR(254),  
  requestURL VARCHAR(254),  
  remoteHost VARCHAR(254),  
  remoteUser VARCHAR(254),  
  remoteAddr VARCHAR(254),  
  protocol VARCHAR(254),  
  method VARCHAR(254),  
  serverName VARCHAR(254),  
  postContent VARCHAR(254),  
  event_id BIGINT NOT NULL IDENTITY);
```

```
CREATE TABLE access_event_header (  
  event_id BIGINT NOT NULL,  
  header_key VARCHAR(254) NOT NULL,  
  header_value LONGVARCHAR,  
  PRIMARY KEY(event_id, header_key),  
  FOREIGN KEY (event_id) REFERENCES access_event(event_id));
```

Found in path(s):

\* /opt/cola/permits/1473592185\_1668797828.4076514/0/logback-access-1-2-9-jar/ch/qos/logback/access/db/script/hsqldb.sql

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```
# This SQL script creates the required tables by ch.qos.logback.access.db.DBAppender.  
#  
# It is intended for MySQL databases. It has been tested on MySQL 5.5.31 with  
# INNODB tables.
```

```
BEGIN;  
DROP TABLE IF EXISTS access_event_header;  
DROP TABLE IF EXISTS access_event;  
COMMIT;  
  
BEGIN;  
CREATE TABLE access_event  
(  
  timestmp      BIGINT NOT NULL,  
  requestURI    VARCHAR(254),  
  requestURL    VARCHAR(254),  
  remoteHost    VARCHAR(254),  
  remoteUser    VARCHAR(254),  
  remoteAddr    VARCHAR(254),  
  protocol      VARCHAR(254),  
  method        VARCHAR(254),  
  serverName    VARCHAR(254),  
  postContent   VARCHAR(254),  
  event_id      BIGINT NOT NULL AUTO_INCREMENT PRIMARY KEY  
);  
COMMIT;
```

```
BEGIN;  
CREATE TABLE access_event_header  
(  
  event_id      BIGINT NOT NULL,  
  header_key    VARCHAR(254) NOT NULL,  
  header_value  VARCHAR(1024),  
  PRIMARY KEY(event_id, header_key),  
  FOREIGN KEY (event_id) REFERENCES access_event(event_id)  
);  
COMMIT;
```

Found in path(s):

```
* /opt/cola/permits/1473592185_1668797828.4076514/0/logback-access-1-2-9-  
jar/ch/qos/logback/access/db/script/mysql.sql
```

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```
-- conditions.  
  
-- This SQL script creates the required tables by ch.qos.logback.access.db.DBAppender  
--
```

```
DROP TABLE access_event_header
```

```
DROP TABLE access_event
```

```
CREATE TABLE access_event
```

```
(  
  timestmp      BIGINT NOT NULL,  
  requestURI    VARCHAR(254),  
  requestURL    VARCHAR(254),  
  remoteHost    VARCHAR(254),  
  remoteUser    VARCHAR(254),  
  remoteAddr    VARCHAR(254),  
  protocol      VARCHAR(254),  
  method        VARCHAR(254),  
  serverName    VARCHAR(254),  
  postContent   VARCHAR(254),  
  event_id      INT NOT NULL identity,  
  PRIMARY KEY(event_id)  
)
```

```
CREATE TABLE access_event_header
```

```
(  
  event_id      INT NOT NULL,  
  header_key    VARCHAR(254) NOT NULL,  
  header_value  VARCHAR(1024),  
  PRIMARY KEY(event_id, header_key),  
  FOREIGN KEY (event_id) REFERENCES access_event(event_id)  
)
```

Found in path(s):

```
* /opt/cola/permits/1473592185_1668797828.4076514/0/logback-access-1-2-9-  
jar/ch/qos/logback/access/db/script/msSQLServer.sql
```

## 1.37 dropwizard-utility-classes 2.0.28

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## 1.38 io-grpc-grpc-protobuf-lite 1.39.0

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Found in path(s):

```
* /opt/cola/permits/1183892729_1655096107.2169387/0/grpc-protobuf-lite-1-39-0-sources-
jar/io/grpc/protobuf-lite/ProtoLiteUtils.java
* /opt/cola/permits/1183892729_1655096107.2169387/0/grpc-protobuf-lite-1-39-0-sources-
jar/io/grpc/protobuf-lite/ProtoInputStream.java
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\* /opt/cola/permits/1183892729\_1655096107.2169387/0/grpc-protobuf-lite-1-39-0-sources-jar/io/grpc/protobuf-lite/package-info.java

## 1.39 rocksdb-jni 6.6.4

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# 1.40 dropwizard-database-support 2.0.28

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# 1.41 io-grpc-grpc-protobuf 1.39.0

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```

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\* /opt/cola/permits/1183891218\_1655096184.4932175/0/grpc-protobuf-1-39-0-sources-1-jar/io/grpc/protobuf/package-info.java

\* /opt/cola/permits/1183891218\_1655096184.4932175/0/grpc-protobuf-1-39-0-sources-1-jar/io/grpc/protobuf/StatusProto.java

\* /opt/cola/permits/1183891218\_1655096184.4932175/0/grpc-protobuf-1-39-0-sources-1-jar/io/grpc/protobuf/ProtoMethodDescriptorSupplier.java

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## 1.42 micronaut-kubernetes 3.4.0

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\* /opt/cola/permits/1331474306\_1653514752.2550623/0/micronaut-kubernetes-client-3-4-0-sources-jar/io/micronaut/kubernetes/client/NamespaceResolver.java

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\* /opt/cola/permits/1331474306\_1653514752.2550623/0/micronaut-kubernetes-client-3-4-0-sources-jar/io/micronaut/kubernetes/client/ApisAutomaticFeatureMetadata.java

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\* /opt/cola/permits/1331474306\_1653514752.2550623/0/micronaut-kubernetes-client-3-4-0-sources-jar/io/micronaut/kubernetes/client/ModelMapper.java  
\* /opt/cola/permits/1331474306\_1653514752.2550623/0/micronaut-kubernetes-client-3-4-0-sources-jar/io/micronaut/kubernetes/client/DefaultPodNameResolver.java  
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## 1.43 netty/transport/classes/epoll 4.1.73.Final

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Manifest-Version: 1.0

Implementation-Title: Netty/Transport/Native/Epoll

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.transport.epoll

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Bundle-SymbolicName: io.netty.transport-native-epoll

Implementation-Version: 4.1.73.Final

Built-By: root

Bnd-LastModified: 1641972717827

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;

version="[1,2]";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2]";resolution:=optional  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Bundle-Name: Netty/Transport/Native/Epoll  
Bundle-Version: 4.1.73.Final  
Bundle-NativeCode: META-INF/native/libnetty\_transport\_native\_epoll\_aarch\_64.so; osname=Linux; processor=aarch\_64,\*  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_312  
Implementation-URL: <https://netty.io/netty-transport-native-epoll/>

Found in path(s):

\* /opt/cola/permits/1290493747\_1648156873.67/0/netty-transport-native-epoll-4-1-73-final-linux-aarch-64-jar/META-INF/MANIFEST.MF

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\* /opt/cola/permits/1290493747\_1648156873.67/0/netty-transport-native-epoll-4-1-73-final-linux-aarch-64-jar/META-INF/maven/io.netty/netty-transport-native-epoll/pom.xml

## 1.44 dropwizard-servlet-support 2.0.28

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## 1.46 jetbrains-kotlin-kotlin-stdlib-jdk8 1.6.10

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## 1.50 lz4-and-xxhash 1.7.1

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Found in path(s):

\* /opt/cola/permits/1274703681\_1645234024.72/0/feign-slf4j-8-18-0-sources-jar/feign/slf4j/Slf4jLogger.java

# 1.52 jackson-datatype-jsr310 2.13.3

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# 1.53 fabric8-::-kubernetes-model-::-batch

## 4.10.3

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## 1.54 disruptor-framework 3.3.6

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# 1.56 apache-zookeeper-jute 3.8.0

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* Rob Earhart
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*/
```

Found in path(s):

```
* /opt/cola/permits/1183891771_1658981142.4749572/0/scala-collection-compat-2-13-2-3-0-sources-jar/scala/collection/compat/package.scala  
* /opt/cola/permits/1183891771_1658981142.4749572/0/scala-collection-compat-2-13-2-3-0-sources-jar/scala/collection/compat/immutable/package.scala
```

## 1.60 elasticsearch-kubernetes-cloud-plugin

### 4.10.3

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## 1.61 swagger-jaxrs2 2.1.6

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Manifest-Version: 1.0

Automatic-Module-Name: io.swagger.v3.jaxrs2

Bnd-LastModified: 1607101154572

Build-Jdk: 1.8.0\_275

Built-By: runner

Bundle-Description: swagger-jaxrs2

Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>

Bundle-ManifestVersion: 2

Bundle-Name: swagger-jaxrs2

Bundle-SymbolicName: io.swagger.core.v3.swagger-jaxrs2

Bundle-Version: 2.1.6

Created-By: Apache Maven Bundle Plugin

Export-Package: io.swagger.v3.jaxrs2;uses:="com.fasterxml.jackson.annotation,com.fasterxml.jackson.databind.introspect,io.swagger.v3.jaxrs2.ext,io.swagger.v3.oas.annotations,io.swagger.v3.oas.annotations.parameters,io.swagger.v3.oas.annotations.responses,io.swagger.v3.oas.annotations.security,io.swagger.v3.oas.integration.api,io.swagger.v3.oas.models,io.swagger.v3.oas.models.media,io.swagger.v3.oas.models.parameters,io.swagger.v3.oas.models.responses,io.swagger.v3.oas.models.security,io.swagger.v3.oas.models.servers,javax.ws.rs,javax.ws.rs.core,javax.ws.rs.ext";version="2.1.6",io.swagger.v3.jaxrs2.ext;uses:="com.fasterxml.jackson.annotation,com.fasterxml.jackson.databind,io.swagger.v3.jaxrs2,io.swagger.v3.oas.models,javax.ws.rs";version="2.1.6",io.swagger.v3.jaxrs2.integration;uses:="io.swagger.v3.jaxrs2.integration.api,io.swagger.v3.oas.integration,io.swagger.v3.oas.integration.api,javax.servlet,javax.servlet.http,javax.ws.rs.core,org.apache.commons.lang3.tuple,org.slf4j";version="2.1.6",io.swagger.v3.jaxrs2.integration.api;uses:="io.swagger.v3.oas.integration.api,javax.servlet,javax.ws.rs.core";version="2.1.6",io.swagger.v3.jaxrs2.integration.resources;uses:="io.swagger.v3.oas.annotations,io.swagger.v3.oas.integration.api,javax.servlet,javax.ws.rs,javax.ws.rs.core";version="2.1.6",io.swagger

```
er.v3.jaxrs2.util;uses:="com.fasterxml.jackson.annotation,io.swagger.
v3.jaxrs2.ext,io.swagger.v3.oas.integration.api,io.swagger.v3.oas.mod
els,io.swagger.v3.oas.models.parameters,javax.servlet.http,javax.ws.r
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implementation-version: 2.1.6
Import-Package: javax.ws.rs;version="2.0",javax.ws.rs.core;version="2.
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javax.servlet;version="[4.0,5)",javax.servlet.http;version="[4.0,5)",
org.apache.commons.lang3;version="[3.7,4)",org.apache.commons.lang3.t
uple;version="[3.7,4)",org.slf4j;version="[1.7,2)"
mode: development
package: io.swagger
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"
Tool: Bnd-4.2.0.201903051501
url: https://github.com/swagger-api/swagger-core/modules/swagger-jaxrs
2
```

Found in path(s):

\* /opt/cola/permits/1148119609\_1654840282.6346464/0/swagger-jaxrs2-2-1-6-jar/META-INF/MANIFEST.MF

# 1.62 fabric8-::-kubernetes-model-::-discovery

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\* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/META-INF/native-image/io.micronaut.sql/micronaut-jdbc/native-image.properties

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Found in path(s):

- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/JdbcDatabaseManager.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/BasicJdbcConfiguration.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/metadata/DataSourcePoolMetadataProvider.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/spring/SpringDataSourceResolver.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/spring/package-info.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/DataSourceResolver.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/spring/HibernatePresenceCondition.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/metadata/AbstractDataSourcePoolMetadata.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/spring/DataSourceTransactionManagerFactory.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/metadata/package-info.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/CalculatedSettings.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/package-info.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/metadata/DataSourcePoolMetadata.java
- \* /opt/cola/permits/1331473530\_1653512647.1916578/0/micronaut-jdbc-4-2-2-sources-jar/io/micronaut/jdbc/nativeimage/JdbcFeature.java

## 1.64 checker-qual 3.15.0

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## 1.65 okhttp 3.12.12

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Found in path(s):

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* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/OkHostnameVerifier.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/BridgeInterceptor.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/connection/ConnectInterceptor.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/cache/CacheInterceptor.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/platform/OptionalMethod.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/ConnectionPool.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/connection/RealConnection.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Connection.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Headers.java
```

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/DistinguishedNameParser.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/CertificateChainCleaner.java  
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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/FormBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/CipherSuite.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/http2/PushObserver.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/ws/WebSocketReader.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/RealCall.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/Internal.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/Version.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/TlsVersion.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Call.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/ws/WebSocketProtocol.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/ResponseBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/ws/WebSocketWriter.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/http/RealResponseBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/MultipartBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Protocol.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/RequestBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/CertificatePinner.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/platform/ConscryptPlatform.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/cache/CacheRequest.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Challenge.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Callback.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Interceptor.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/Header.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/HttpMethod.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/ConnectionSpec.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Credentials.java  
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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/BasicTrustRootIndex.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/CallServerInterceptor.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/cache2/Relay.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/UnrepeatableRequestBody.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/ConnectionShutdownException.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/platform/Jdk9Platform.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/platform/JdkWithJettyBootPlatform.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/WebSocketListener.java

\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/http/RealInterceptorChain.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/BasicCertificateChainCleaner.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/platform/AndroidPlatform.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/tls/TrustRootIndex.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/ws/RealWebSocket.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/cache2/FileOperator.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/RetryAndFollowUpInterceptor.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/StreamResetException.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/WebSocket.java  
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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Authenticator.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/connection/StreamAllocation.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Cookie.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/io/FileSystem.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/HttpUrl.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/CookieJar.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/connection/RouteException.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-

jar/okhttp3/internal/cache/FaultHidingSink.java

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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/cache/DiskLruCache.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/Http2Reader.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/Http2Stream.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/HttpDate.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http2/Http2Connection.java

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* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/cache/InternalCache.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/http/RequestLine.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/connection/RouteDatabase.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/http2/ErrorCode.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/http2/Hpack.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Response.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/MediaType.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Dispatcher.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Request.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Route.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/NamedRunnable.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Handshake.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/http/StatusLine.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/http2/Http2.java
* /opt/cola/permits/1331474321_1653068657.9097114/0/okhttp-3-12-12-sources-3-
jar/okhttp3/internal/cache/CacheStrategy.java
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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Dns.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-  
jar/okhttp3/internal/connection/RouteSelector.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/OkHttpClient.java  
\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-  
jar/okhttp3/internal/http2/Settings.java

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jar/okhttp3/internal/platform/Android10Platform.java

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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/publicsuffix/PublicSuffixDatabase.java  
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\* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/annotations/EverythingIsNonNull.java  
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- \* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/Address.java
- \* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/Util.java
- \* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/HttpHeaders.java
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- \* /opt/cola/permits/1331474321\_1653068657.9097114/0/okhttp-3-12-12-sources-3-jar/okhttp3/internal/http/Http1Codec.java

# 1.66 spock-framework---bill-of-materials 2.0-groovy-3.0

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```
* /opt/cola/permits/1341639818_1654816582.0388222/0/common-config-5-5-5-jar/META-INF/maven/io.confluent/common-config/pom.xml
```

## 1.68 fabric8-::-kubernetes-model-::-admission-registration,-authentication-and-authorization 4.10.3

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jar/com/google/common/collect/CollectSpliterators.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/package-info.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ImmutableBiMapFauxverideShim.java
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jar/com/google/common/hash/AbstractHashFunction.java
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jar/com/google/common/primitives/ImmutableLongArray.java
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jar/com/google/common/util/concurrent/ForwardingCondition.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
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Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/AbstractRangeSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/Count.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ForwardingSortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ImmutableSortedMultisetFauxverideShim.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/SortedIterable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/RangeSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/SortedIterables.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ImmutableSortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/RegularImmutableSortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/GeneralRange.java

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/\*\*

\* Holder for web specializations of methods of { @code Doubles }. Intended to be empty for regular  
\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/DoublesMethodsForWeb.java

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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/internal/Finalizer.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/thirdparty/publicsuffix/TrieParser.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/SequentialExecutor.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/CharMatcher.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/net/PercentEscaper.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/Doubles.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/Joiner.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/Booleans.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/Converter.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/Longs.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/Floats.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/Ints.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/FluentIterable.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/io/FileBackedOutputStream.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/UnicodeEscaper.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ListenableFutureTask.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/net/InetAddresses.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/Bytes.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/Escaper.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/Chars.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Stopwatch.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/MultiReader.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/Shorts.java

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jar/com/google/common/collect/JdkBackedImmutableMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/JdkBackedImmutableSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/ImmutableSupplier.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ExecutionSequencer.java

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*/
/*
* This method was rewritten in Java from an intermediate step of the Murmur hash function in
* http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the
* following header:
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*/
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jar/com/google/common/collect/Hashing.java
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jar/com/google/common/collect/ForwardingListMultimap.java
```

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
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jar/com/google/common/collect/RowSortedTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ForwardingSortedSetMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/SortedMapDifference.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ForwardingImmutableCollection.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ForwardingSetMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/MinMaxPriorityQueue.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/AbstractSequentialIterator.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/UnmodifiableListIterator.java  
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jar/com/google/common/eventbus/SubscriberRegistry.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/eventbus/Subscriber.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/TrustedListenableFutureTask.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/eventbus/Dispatcher.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/MoreObjects.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ListenerCallQueue.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/Quantiles.java

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 */
/*
 * This method was written by Doug Lea with assistance from members of JCP JSR-166 Expert Group
 * and released to the public domain, as explained at
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 *
 * As of 2010/06/11, this method is identical to the (package private) hash method in OpenJDK 7's
 * java.util.HashMap class.
 */
```

Found in path(s):

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/Striped.java
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jar/com/google/common/util/concurrent/ServiceManagerBridge.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Java8Usage.java  
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```
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jar/com/google/common/io/CharSink.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/package-info.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ListenableScheduledFuture.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/BaseEncoding.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/package-info.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/CartesianList.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/PairedStats.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/RateLimiter.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/Element.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/xml/package-  
info.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ServiceManager.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/FilteredKeyMultimap.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/ImmutableTypeToInstanceMap.java  
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
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jar/com/google/common/reflect/Parameter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/LongAddable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/MutableTypeToInstanceMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/TypeToInstanceMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/html/package-info.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/ChecksumHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/io/Closer.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/ClassPath.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/LongAddable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/ByteSink.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/PairedStatsAccumulator.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/FileWriteMode.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/StandardSystemProperty.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/ByteSource.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/Invokable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ImmutableRangeSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/CharSource.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/LongAddables.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/AbstractInvocationHandler.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/SipHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/TypeCapture.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/math/StatsAccumulator.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/LongAddables.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/math/LinearTransformation.java  
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Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/GwtTransient.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/AtomicLongMap.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/ForwardingBlockingDeque.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingBlockingDeque.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TreeRangeMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/AbstractNavigableMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingImmutableList.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableEnumMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingImmutableMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingNavigableMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TreeTraverser.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/RangeMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/DescendingImmutableSortedSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TransformedListIterator.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/SortedMultisetBridge.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingNavigableSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/UnmodifiableSortedMultiset.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/CompactHashSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/AbstractSortedKeySortedSetMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/EvictingQueue.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/FilteredEntryMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingImmutableSet.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/CompactLinkedHashMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/FilteredSetMultimap.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/RegularImmutableAsList.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/FilteredEntrySetMultimap.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/AbstractMapBasedMultimap.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TreeMultiset.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/MutableClassToInstanceMap.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

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jar/com/google/common/collect/Ordering.java  
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jar/com/google/common/collect/ForwardingMultiset.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/CompactHashing.java

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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/io/MoreFiles.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMapEntry.java

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```
*/
/**
 * Outer class that exists solely to let us write {@code Partially.GwtIncompatible} instead of plain
 * {@code GwtIncompatible}. This is more accurate for {@link Futures#catching}, which is available
 * under GWT but with a slightly different signature.
 *
 * <p>We can't use {@code PartiallyGwtIncompatible} because then the GWT compiler wouldn't recognize
 * it as a {@code GwtIncompatible} annotation. And for {@code Futures.catching}, we need the GWT
 * compiler to autostrip the normal server method in order to expose the special, inherited GWT
 * version.
 */
```

Found in path(s):

```
*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/Partially.java
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jar/com/google/common/eventbus/SubscriberExceptionHandler.java
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jar/com/google/common/base/Utf8.java
*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/thirdparty/publicsuffix/PublicSuffixType.java
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*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/WrappingScheduledExecutorService.java
*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/hash/HashingInputStream.java
*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/base/Verify.java
*/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
```

jar/com/google/common/collect/AbstractTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Runnables.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/TypeVisitor.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/CharSequenceReader.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/FilteredMultimapValues.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/VerifyException.java

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jar/com/google/common/collect/SparseImmutableTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/MapMakerInternalMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/html/HtmlEscapers.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/ArrayBasedUnicodeEscaper.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ForwardingFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/JdkFutureAdapters.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ForwardingListenableFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/annotations/GwtCompatible.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/net/InternetDomainName.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/net/HostSpecifier.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/ReferenceEntry.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/ArrayBasedCharEscaper.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/ArrayBasedEscaperMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/TypeResolver.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/LineProcessor.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/DenseImmutableTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/SettableFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Callables.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AbstractExecutionThreadService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/net/UrlEscapers.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ForwardingFluentFuture.java  
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jar/com/google/common/collect/Cut.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/Platform.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/MapMaker.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/ByteArrayDataInput.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Platform.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/CacheBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AbstractService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/RegularImmutableTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/xml/XmlEscapers.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/io/ByteProcessor.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/ByteArrayDataOutput.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/UnsignedBytes.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Service.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/SignedBytes.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AbstractIdleService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
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jar/com/google/common/collect/SortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/SortedMultisets.java  
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jar/com/google/common/math/ToDoubleRounder.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/OverflowAvoidingLockSupport.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/Java8Compatibility.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/BigDecimalMath.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
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jar/com/google/common/graph/MutableNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ImmutableNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/TopKSelector.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/RecursiveDeleteOption.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/PredecessorsFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/Network.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/MutableGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/Graphs.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/Graph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/InsecureRecursiveDeleteException.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/SuccessorsFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ImmutableGraph.java

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- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableSetMultimap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableSortedMap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/RegularImmutableList.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableEnumSet.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ComputationException.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ComparisonChain.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/RegularImmutableSortedSet.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/AbstractIndexedListIterator.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/SingletonImmutableTable.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableAsList.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ArrayTable.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ForwardingTable.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/EmptyImmutableSetMultimap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/DiscreteDomain.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableClassToInstanceMap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableSortedSetFauxverideShim.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableTable.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TableCollectors.java

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- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/Striped64.java
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- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/thirdparty/publicsuffix/PublicSuffixPatterns.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/StandardRowSortedTable.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableBiMap.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/PeekingIterator.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableSortedSet.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMultiset.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/UnmodifiableIterator.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/Range.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableListMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/CollectPreconditions.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableEntry.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMultimap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableCollection.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/Table.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/StandardTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/TreeBasedTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/HashBasedTable.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMapKeySet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/SingletonImmutableBiMap.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/Serialization.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMapValues.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableMapEntrySet.java  
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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/AbstractValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/ElementOrder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ArrayListMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/GraphConstants.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/ImmutableValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/MapRetrievalCache.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/AbstractDirectedNetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/DirectedMultiNetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/StandardMutableNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/StandardNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/NetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/MultiEdgesConnecting.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/GraphBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/MutableValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/ForwardingNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/MoreCollectors.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/EndpointPair.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/graph/DirectedGraphConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/collect/CollectCollectors.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/AbstractGraphBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/Comparators.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/AbstractGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/StandardValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/LinkedHashMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/AbstractNetwork.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/GraphConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/AbstractUndirectedNetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/NetworkBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ValueGraphBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ForwardingValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/EdgesConnecting.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ImmutableMultisetGwtSerializationDependencies.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/MapIteratorCache.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/UndirectedGraphConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/RangeGwtSerializationDependencies.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/ForwardingGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/StandardMutableValueGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/HashMultimapGwtSerializationDependencies.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/EndpointPairIterator.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/UndirectedNetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/UndirectedMultiNetworkConnections.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/graph/StandardMutableGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/DirectedNetworkConnections.java  
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jar/com/google/common/graph/AbstractBaseGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/BaseGraph.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/graph/Traverser.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ClosingFuture.java  
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*/  
/**  
* Holder for web specializations of methods of { @code Shorts }. Intended to be empty for regular
```

\* version.

\*/

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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/ShortsMethodsForWeb.java

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/\*\*

\* Holder for extra methods of { @code Objects } only in web. Intended to be empty for regular  
\* version.

\*/

Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/ExtraObjectsMethodsForWeb.java

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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/Platform.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/AsyncCallable.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/io/ReaderInputStream.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/InterruptibleTask.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/AggregateFutureState.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ConsumingQueueIterator.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/LittleEndianByteArray.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/CombinedFuture.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/MacHashFunction.java

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jar/com/google/common/collect/ImmutableSortedAsList.java  
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jar/com/google/common/util/concurrent/ForwardingBlockingQueue.java  
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jar/com/google/common/util/concurrent/ThreadFactoryBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/SortedLists.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/UncaughtExceptionHandler.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/annotations/package-info.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Monitor.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/annotations/Beta.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Atomics.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/base/Strings.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Ascii.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ContiguousSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/package-info.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/net/package-  
info.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Equivalence.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ListeningExecutorService.java  
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```
*/  
/*  
 * This method was rewritten in Java from an intermediate step of the Murmur hash function in  
 * http://code.google.com/p/smhasher/source/browse/trunk/MurmurHash3.cpp, which contained the  
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 *  
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*/
/**
* Holder for web specializations of methods of { @code Ints}. Intended to be empty for regular
* version.
*/
```

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```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
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\*/  
/\*\*

\* Returns an array containing all of the elements in the specified collection. This method  
\* returns the elements in the order they are returned by the collection's iterator. The returned  
\* array is "safe" in that no references to it are maintained by the collection. The caller is  
\* thus free to modify the returned array.  
\*  
\* <p>This method assumes that the collection size doesn't change while the method is running.  
\*  
\* <p>TODO(kevinb): support concurrently modified collections?  
\*  
\* @param c the collection for which to return an array of elements  
\*/

Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/ObjectArrays.java

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\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/JdkBackedImmutableBiMap.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/JdkBackedImmutableMap.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/BaseImmutableMultimap.java

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/collect/IndexedImmutableSet.java

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 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
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 * limitations under the License.
 */
/**
 * Not supported. <b>You are attempting to create a map that may contain a non-{@code Comparable}
 * key.</b> Proper calls will resolve to the version in {@code ImmutableSortedMap}, not this dummy
 * version.
 *
 * @throws UnsupportedOperationException always
 * @deprecated <b>Pass a key of type {@code Comparable} to use {@link
 *   ImmutableSortedMap#of(Comparable, Object)}.</b>
 */
```

Found in path(s):

`/opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/ImmutableSortedMapFauxverideShim.java`

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 */
```

Found in path(s):

- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/Murmur3\_32HashFunction.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/RemovalListener.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/ForwardingExecutorService.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/ExecutionError.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/package-info.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/primitives/UnsignedInts.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/Uninterruptibles.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/ForwardingCache.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/Murmur3\_128HashFunction.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/LoadingCache.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/BloomFilterStrategies.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/CacheLoader.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/reflect/Types.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/FutureCallback.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/reflect/TypeParameter.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/collect/RegularContiguousSet.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/hash/PrimitiveSink.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/AbstractScheduledService.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/base/Optional.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/RemovalCause.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/util/concurrent/ForwardingListeningExecutorService.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/CacheBuilderSpec.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-jar/com/google/common/cache/AbstractCache.java
- \* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/hash/HashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/BoundType.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/AbstractHasher.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/Queues.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/DescendingImmutableSortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/Hasher.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Enums.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/RegularImmutableMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/UnsignedLong.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/package-info.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/BloomFilter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/WrappingExecutorService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/HashCode.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/RemovalNotification.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/BigIntegerMath.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/UncheckedExecutionException.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/AbstractCompositeHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/Weigher.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AsyncFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/net/HttpHeaders.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/IntMath.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/RemovalListeners.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/MessageDigestHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/Crc32cHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

jar/com/google/common/cache/Cache.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/AbstractSortedMultiset.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/UnsignedInteger.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/UnsignedLongs.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/primitives/ParseRequest.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/AbstractLoadingCache.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/DoubleMath.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Absent.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/AbstractStreamingHasher.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/CacheStats.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/FunctionalEquivalence.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/CycleDetectingLockFactory.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/cache/ForwardingLoadingCache.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/collect/TreeRangeSet.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/Funnels.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/AbstractNonStreamingHashFunction.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AbstractListeningExecutorService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Present.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/Ticker.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/hash/Funnel.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/math/DoubleUtils.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/ListeningScheduledExecutorService.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/net/MediaType.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/PairwiseEquivalence.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

```
jar/com/google/common/hash/HashingOutputStream.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/net/HostAndPort.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/math/LongMath.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/hash/Hashing.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/collect/EmptyContiguousSet.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/math/MathPreconditions.java
```

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```

```
*/
```

```
/*
```

```
* This following method is a modified version of one found in
```

```
* http://gee.cs.oswego.edu/cgi-bin/viewcvs.cgi/jsr166/src/test/tck/AbstractExecutorServiceTest.java?revision=1.30
```

```
* which contained the following notice:
```

```
*
```

```
* Written by Doug Lea with assistance from members of JCP JSR-166 Expert Group and released to
* the public domain, as explained at http://creativecommons.org/publicdomain/zero/1.0/
```

```
*
```

```
* Other contributors include Andrew Wright, Jeffrey Hayes, Pat Fisher, Mike Judd.
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/MoreExecutors.java
```

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```

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```

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*
```

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express
* or implied. See the License for the specific language governing permissions and limitations under
* the License.
*/
/**
* Holder for web specializations of methods of { @code Floats }. Intended to be empty for regular
* version.
*/
```

Found in path(s):

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/primitives/FloatsMethodsForWeb.java
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```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/base/CommonMatcher.java
```

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/base/PatternCompiler.java
```

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/base/CommonPattern.java
```

```
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/base/JdkPattern.java
```

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Found in path(s):

\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/AppendableWriter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/FuturesGetChecked.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AggregateFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/base/CaseFormat.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/annotations/VisibleForTesting.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/Futures.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/GwtFuturesCatchingSpecialization.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/AbstractTransformFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/CharEscaperBuilder.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/TimeoutFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/SimpleTimeLimiter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/FakeTimeLimiter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/escape/CharEscaper.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/FluentFuture.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/util/concurrent/TimeLimiter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/reflect/TypeToken.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-  
jar/com/google/common/io/PatternFilenameFilter.java  
\* /opt/cola/permits/1162863591\_1620924149.63/0/guava-30-1-1-jre-sources-

```
jar/com/google/common/util/concurrent/AbstractCatchingFuture.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/ImmediateFuture.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/GwtFluentFutureCatchingSpecialization.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/UncheckedTimeoutException.java
* /opt/cola/permits/1162863591_1620924149.63/0/guava-30-1-1-jre-sources-
jar/com/google/common/util/concurrent/CollectionFuture.java
```

## 1.74 generex 1.0.2

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Found in path(s):

```
* /opt/cola/permits/1162863542_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-
e910243/README.md
```

No license file was found, but licenses were detected in source scan.

```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.github.mifmif</groupId>
  <artifactId>generex</artifactId>
  <version>1.0.2</version>
  <name>Generex</name>
  <url>https://github.com/mifmif/Generex/tree/master</url>
  <description>Generex A Java Library for regex to Strings generation</description>
  <packaging>jar</packaging>
  <licenses>
    <license>
      <name>The Apache Software License, Version 2.0</name>
      <url>http://www.apache.org/licenses/LICENSE-2.0.txt</url>
      <distribution>repo</distribution>
    </license>
  </licenses>
  <developers>
    <developer>
      <id>mifmif</id>
      <name>MIFRAH Youssef</name>
      <email>mifmif.com@gmail.com</email>
    </developer>
    <developer>
```

```

<id>mkolisnyk</id>
<name>mkolisnyk</name>
<email>kolesnik.nickolay@gmail.com</email>
</developer>
</developers>

<parent>
<groupId>org.sonatype.oss</groupId>
<artifactId>oss-parent</artifactId>
<version>7</version>
</parent>

<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<maven.pmd.excludes>*/generated-sources/*</maven.pmd.excludes>
</properties>

<scm>
<connection>scm:git:git@github.com:mifmif/Generex.git</connection>
<developerConnection>scm:git:git@github.com:mifmif/Generex.git</developerConnection>
<url>https://github.com/mifmif/Generex.git</url>
</scm>

<ciManagement>
<url>https://travis-ci.org/mifmif/Generex/builds</url>
<system>Travis</system>
<notifiers>
<notifier>
<address>mifmif.com@gmail.com</address>
<type>mail</type>
</notifier>
<notifier>
<address>kolesnik.nickolay@gmail.com</address>
<type>mail</type>
</notifier>
</notifiers>
</ciManagement>

<distributionManagement>
<snapshotRepository>
<id>ossrh</id>
<url>https://oss.sonatype.org/content/repositories/snapshots</url>
</snapshotRepository>
<repository>
<id>ossrh</id>
<url>https://oss.sonatype.org/service/local/staging/deploy/maven2/</url>
</repository>
</distributionManagement>

```

```

<build>
  <sourceDirectory>src/main/java</sourceDirectory>
  <testSourceDirectory>src/test/java</testSourceDirectory>
  <resources>
    <resource>
      <directory>src</directory>
      <excludes>
        <exclude>**/*.java</exclude>
      </excludes>
    </resource>
    <resource>
      <directory>target/dependency</directory>
      <excludes>
        <exclude>**/*.java</exclude>
      </excludes>
    </resource>
    <resource>
      <directory>src/main/resources</directory>
      <includes>
        <include>**/*.properties</include>
      </includes>
    </resource>
  </resources>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-install-plugin</artifactId>
      <version>2.5.2</version>
      <configuration>
        <file>target/${project.artifactId}-${project.version}.jar</file>
        <groupId>${project.groupId}</groupId>
        <artifactId>${project.artifactId}</artifactId>
        <version>${project.version}</version>
        <packaging>maven-plugin</packaging>
      </configuration>
    </plugin>

    <plugin>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>3.5.1</version>
      <configuration>
        <source>1.5</source>
        <target>1.5</target>
      </configuration>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-jar-plugin</artifactId>

```

```

<version>3.0.2</version>
<configuration>
  <excludes>
    <exclude>*</exclude>
    <exclude>com/thoughtworks/**/*</exclude>
    <exclude>freemarker/**/*</exclude>
    <exclude>ftl/**/*</exclude>
    <exclude>i18n/**/*</exclude>
    <exclude>style/**/*</exclude>
    <exclude>junit/**/*</exclude>
    <exclude>licenses/**/*</exclude>
    <exclude>META-INF/maven/**/*</exclude>
    <exclude>org/codehaus/**/*</exclude>
    <exclude>org/hamcrest/**/*</exclude>
    <exclude>org/jbehave/**/*</exclude>
    <exclude>org/junit/**/*</exclude>
    <exclude>org/testng/**/*</exclude>
    <exclude>org/xmlpull/**/*</exclude>
    <exclude>stories/**/*</exclude>
    <exclude>style/**/*</exclude>
    <exclude>tests/**/*</exclude>
  </excludes>
  <archive>
    <manifest>
      <addClasspath>>false</addClasspath>
      <addDefaultImplementationEntries>>true</addDefaultImplementationEntries>
      <addDefaultSpecificationEntries>>true</addDefaultSpecificationEntries>
      <addExtensions>>false</addExtensions>
      <classpathLayoutType>simple</classpathLayoutType>
    </manifest>
  </archive>
</configuration>
</plugin>
<plugin>
  <artifactId>maven-assembly-plugin</artifactId>
  <version>2.6</version>
  <configuration>
    <descriptors>
      <descriptor>./sources.xml</descriptor>
    </descriptors>
  </configuration>
</plugin>
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-dependency-plugin</artifactId>
  <version>2.10</version>
</plugin>
<plugin>

```

```
<groupId>org.apache.maven.plugins</groupId>
<artifactId>maven-javadoc-plugin</artifactId>
<version>2.10.3</version>
<configuration>
  <show>private</show>
  <nohelp>>false</nohelp>
  <failOnError>>false</failOnError>
  <sourcepath>src/main/java</sourcepath>
</configuration>
</plugin>
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-release-plugin</artifactId>
  <configuration>
    <tagNameFormat>v@{project.version}</tagNameFormat>
    <preparationGoals>package install:install-file</preparationGoals>
    <scmCommentPrefix>#3</scmCommentPrefix>
  </configuration>
</plugin>
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-deploy-plugin</artifactId>
  <version>2.8.2</version>
  <configuration>
    <skip>>true</skip>
  </configuration>
</plugin>
```

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-source-plugin</artifactId>
  <version>3.0.1</version>
  <executions>
    <execution>
      <goals>
        <goal>jar-no-fork</goal>
      </goals>
    </execution>
  </executions>
</plugin>
```

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-javadoc-plugin</artifactId>
  <executions>
    <execution>
```

```
<id>attach-javadocs</id>
<goals>
  <goal>jar</goal>
</goals>
</execution>
</executions>
</plugin>
```

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-gpg-plugin</artifactId>
  <executions>
    <execution>
      <id>sign-artifacts</id>
      <phase>deploy</phase>
      <goals>
        <goal>sign</goal>
      </goals>
    </execution>
  </executions>
</plugin>
```

```
<plugin>
  <groupId>org.sonatype.plugins</groupId>
  <artifactId>nexus-staging-maven-plugin</artifactId>
  <version>1.6.3</version>
  <executions>
    <execution>
      <id>default-deploy</id>
      <phase>deploy</phase>
      <goals>
        <goal>deploy</goal>
      </goals>
    </execution>
  </executions>
  <extensions>true</extensions>
  <configuration>
    <serverId>ossrh</serverId>
    <nexusUrl>https://oss.sonatype.org/</nexusUrl>
  </configuration>
</plugin>
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-pmd-plugin</artifactId>
  <version>3.6</version>
```

```

<configuration>
  <failOnViolation>true</failOnViolation>
  <excludeRoots>
    <excludeRoot>target/generated-sources/plugin</excludeRoot>
  </excludeRoots>
  <excludes>
    <exclude>**/HelpMojo.java</exclude>
  </excludes>
</configuration>
<executions>
  <execution>
    <goals>
      <goal>check</goal>
      <goal>cpd-check</goal>
    </goals>
    <configuration>
      <failOnViolation>true</failOnViolation>
      <excludes>
        <exclude>**/HelpMojo.java</exclude>
      </excludes>
    </configuration>
  </execution>
</executions>
</plugin>
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-checkstyle-plugin</artifactId>
  <version>2.10</version>
  <configuration>
    <excludes>**/test/java/**/*.*.java</excludes>
    <configLocation>./sun_checks.xml</configLocation>
    <suppressionsLocation>./checkstyle-suppressions.xml</suppressionsLocation>
    <failOnViolation>true</failOnViolation>
  </configuration>
  <executions>
    <execution>
      <goals>
        <goal>check</goal>
      </goals>
    </execution>
  </executions>
</plugin>
<plugin>
  <groupId>org.codehaus.mojo</groupId>
  <artifactId>cobertura-maven-plugin</artifactId>
  <version>2.6</version>
  <configuration>
    <check>

```

```

<haltOnFailure>>false</haltOnFailure>
<totalBranchRate>80</totalBranchRate>
<totalLineRate>80</totalLineRate>
<packageLineRate>80</packageLineRate>
<packageBranchRate>80</packageBranchRate>
</check>
<instrumentation>
  <excludes>
    <exclude>**/HelpMojo.class</exclude>
  </excludes>
</instrumentation>
</configuration>
<executions>
  <execution>
    <id>verification</id>
    <phase>verify</phase>
    <goals>
      <goal>check</goal>
      <goal>cobertura</goal>
    </goals>
  </execution>
</executions>
</plugin>
<plugin>
  <groupId>org.codehaus.mojo</groupId>
  <artifactId>javancss-maven-plugin</artifactId>
  <version>2.0</version>
  <configuration>
    <encoding>${project.build.sourceEncoding}</encoding>
    <ccnLimit>10</ccnLimit>
    <ncssLimit>100</ncssLimit>
    <failOnViolation>>true</failOnViolation>
    <excludes>
      <exclude>**/tests/**/*.*</exclude>
    </excludes>
  </configuration>
  <executions>
    <execution>
      <goals>
        <goal>check</goal>
      </goals>
    </execution>
  </executions>
</plugin>
<plugin>
  <groupId>org.codehaus.mojo</groupId>
  <artifactId>findbugs-maven-plugin</artifactId>
  <version>3.0.3</version>

```

```
<configuration>
  <encoding>${project.build.sourceEncoding}</encoding>
  <failOnError>true</failOnError>
  <excludeFilterFile>findBugsExclude.xml</excludeFilterFile>
</configuration>
<executions>
  <execution>
    <goals>
      <goal>check</goal>
    </goals>
  </execution>
</executions>
</plugin>
<plugin>
  <groupId>org.codehaus.mojo</groupId>
  <artifactId>jdepend-maven-plugin</artifactId>
  <version>2.0</version>
</plugin>
</plugins>
</build>
<dependencies>
  <dependency>
    <groupId>dk.brics.automaton</groupId>
    <artifactId>automaton</artifactId>
    <version>1.11-8</version>
  </dependency>
  <dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.12</version>
    <scope>test</scope>
  </dependency>
  <dependency>
    <groupId>org.hamcrest</groupId>
    <artifactId>hamcrest-junit</artifactId>
    <version>2.0.0.0</version>
    <scope>test</scope>
  </dependency>
</dependencies>
</project>
```

Found in path(s):

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/pom.xml

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\*/

Found in path(s):

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/util/Iterable.java

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/GenerexIterator.java

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/util/Iterator.java

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/Node.java

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/Main.java

\* /opt/cola/permits/1162863542\_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-e910243/src/main/java/com/mifmif/common/regex/Generex.java

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\*/

Found in path(s):

```
* /opt/cola/permits/1162863542_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-
e910243/src/test/java/com/mifmif/common/regex/GenerexUnitTest.java
```

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```
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```

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```
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```

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```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/1162863542_1620923914.63/0/mifmif-generex-1-0-2-0-ge910243-tar-gz/mifmif-Generex-
e910243/src/test/java/com/mifmif/common/regex/GenerexIteratorUnitTest.java
```

## 1.75 fabric8-::-kubernetes-model-::-policy

### 4.10.3

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## 1.76 better-files 3.9.1

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```

Found in path(s):

```
* /opt/cola/permits/1473592053_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-
jar/META-INF/maven/io.netty/netty-transport-native-kqueue/pom.xml
```

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Found in path(s):

\* /opt/cola/permits/1473592053\_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-jar/netty\_kqueue\_bsdsocket.c  
\* /opt/cola/permits/1473592053\_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-jar/netty\_kqueue\_eventarray.c  
\* /opt/cola/permits/1473592053\_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-jar/netty\_kqueue\_native.c  
\* /opt/cola/permits/1473592053\_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-jar/netty\_kqueue\_bsdsocket.h  
\* /opt/cola/permits/1473592053\_1668494735.0463588/0/netty-transport-native-kqueue-4-1-76-final-sources-1-jar/netty\_kqueue\_eventarray.h

## 1.78 javax-inject1-as-osgi-bundle 2.6.1

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## 1.79 checker-qual 3.10.0

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\* /opt/cola/permits/1341639723\_1654785866.3520873/0/jdbi3-core-3-27-2-jar/META-INF/maven/org.jdbi/jdbi3-core/pom.xml

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```
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/validators/NoValueValidator.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/IPParameterValidator.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/validators/PositiveInteger.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-
```

jar/com/beust/jcommander/IPParameterValidator2.java  
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* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/ResourceBundle.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/converters/BaseConverter.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/internal/Sets.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/ParameterDescription.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/converters/IntegerConverter.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/converters/ISO8601DateConverter.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/converters/StringConverter.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/ParametersDelegate.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/converters/LongConverter.java  
* /opt/cola/permits/1009978799_1649800662.98/0/jcommander-1-72-sources-  
jar/com/beust/jcommander/IDefaultProvider.java  
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\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/defaultprovider/PropertyFileDefaultProvider.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/Parameters.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/InetAddressConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/IStringConverterFactory.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/BigDecimalConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/ParameterException.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/FloatConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/NoConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/internal/Maps.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/MissingCommandException.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/URICConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/IStringConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/internal/Lists.java  
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\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/converters/BooleanConverter.java  
\* /opt/cola/permits/1009978799\_1649800662.98/0/jcommander-1-72-sources-jar/com/beust/jcommander/internal/DefaultConverterFactory.java  
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# 1.84 vavr 0.10.2

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# 1.89 kafka-protobuf-provider 5.5.5

## 1.89.1 Available under license :

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```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
```

```
<modelVersion>4.0.0</modelVersion>
```

```
<parent>
```

```
<groupId>io.confluent</groupId>
```

```
<artifactId>kafka-schema-registry-parent</artifactId>
```

```
<version>5.5.5</version>
```

```
</parent>
```

```
<licenses>
  <license>
    <name>Confluent Community License</name>
    <url>http://www.confluent.io/confluent-community-license</url>
    <distribution>repo</distribution>
  </license>
  <license>
    <name>Apache License 2.0</name>
    <url>http://www.apache.org/licenses/LICENSE-2.0.html</url>
    <distribution>repo</distribution>
  </license>
</licenses>
```

```
<artifactId>kafka-protobuf-provider</artifactId>
<packaging>jar</packaging>
<name>kafka-protobuf-provider</name>
```

```
<dependencies>
  <dependency>
    <groupId>com.squareup.wire</groupId>
    <artifactId>wire-schema</artifactId>
  </dependency>
  <dependency>
    <groupId>org.jetbrains.kotlin</groupId>
    <artifactId>kotlin-stdlib</artifactId>
  </dependency>
  <dependency>
    <groupId>com.google.protobuf</groupId>
    <artifactId>protobuf-java</artifactId>
  </dependency>
  <dependency>
    <groupId>com.google.protobuf</groupId>
    <artifactId>protobuf-java-util</artifactId>
  </dependency>
  <dependency>
    <groupId>io.confluent</groupId>
    <artifactId>kafka-schema-registry-client</artifactId>
  </dependency>
  <dependency>
    <groupId>org.mockito</groupId>
    <artifactId>mockito-core</artifactId>
    <scope>test</scope>
  </dependency>
  <dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <scope>test</scope>
  </dependency>
```

```
</dependencies>

<build>
  <plugins>
    <plugin>
      <groupId>com.github.os72</groupId>
      <artifactId>protoc-jar-maven-plugin</artifactId>
    </plugin>
  </plugins>
</build>
</project>
```

Found in path(s):

```
* /opt/cola/permits/1340031662_1654757729.7702703/0/kafka-protobuf-provider-5-5-5-jar/META-INF/maven/io.confluent/kafka-protobuf-provider/pom.xml
```

# 1.90 micronaut-aws 3.2.3

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*/
```

Found in path(s):

```
* /opt/cola/permits/1331474006_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-jar/io/micronaut/discovery/cloud/aws/AmazonComputeInstanceMetadataResolver.java
* /opt/cola/permits/1331474006_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-jar/io/micronaut/discovery/cloud/aws/package-info.java
* /opt/cola/permits/1331474006_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-jar/io/micronaut/discovery/cloud/aws/AmazonNetworkInterface.java
* /opt/cola/permits/1331474006_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-jar/io/micronaut/discovery/cloud/aws/EC2MetadataKeys.java
* /opt/cola/permits/1331474006_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-
```

jar/io/micronaut/discovery/cloud/aws/AmazonEC2InstanceMetadata.java  
\* /opt/cola/permits/1331474006\_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-  
jar/io/micronaut/aws/AWSConfiguration.java  
\* /opt/cola/permits/1331474006\_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-  
jar/io/micronaut/aws/package-info.java  
\* /opt/cola/permits/1331474006\_1653507028.4352036/0/micronaut-aws-common-3-2-3-sources-  
jar/io/micronaut/discovery/cloud/aws/AmazonMetadataConfiguration.java

# 1.91 io-swagger-swagger-annotations 2.1.12

## 1.91.1 Available under license :

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Manifest-Version: 1.0

Bundle-Description: swagger-annotations

Automatic-Module-Name: io.swagger.v3.oas.annotations

Bundle-License: "Apache License 2.0";link="http://www.apache.org/licenses/LICENSE-2.0.html"

package: io.swagger

Bundle-SymbolicName: io.swagger.core.v3.swagger-annotations

implementation-version: 2.1.12

Built-By: runner

Bundle-ManifestVersion: 2

Bundle-DocURL: <https://github.com/swagger-api/swagger-core/modules/swagger-annotations>

Import-Package: io.swagger.v3.oas.annotations,io.swagger.v3.oas.annotations.enums,io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.headers,io.swagger.v3.oas.annotations.info,io.swagger.v3.oas.annotations.links,io.swagger.v3.oas.annotations.media,io.swagger.v3.oas.annotations.parameters,io.swagger.v3.oas.annotations.responses,io.swagger.v3.oas.annotations.security,io.swagger.v3.oas.annotations.servers,io.swagger.v3.oas.annotations.tags

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Bundle-Developers: fehguy;email="fehguy@gmail.com";name="Tony Tam",webbron;email="webbron@gmail.com";name="Ron Ratovsky"

url: <https://github.com/swagger-api/swagger-core/modules/swagger-annotations>

mode: development

Export-Package: io.swagger.v3.oas.annotations;uses:="io.swagger.v3.oas.annotations.enums,io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.info,io.swagger.v3.oas.annotations.media,io.swagger.v3.oas.annotations.parameters,io.swagger.v3.oas.annotations.responses,io.swagger.v3.oas.annotations.security,io.swagger.v3.oas.annotations.servers,io.swagger.v3.oas.annotations.tags";version="2.1.12",io.swagger.v3.oas.annotations.callbacks;uses:="io.swagger.v3.oas.annotations,io.swagger.v3.oas.annotations.extensions";version="2.1.12",io.swagger.v3.oas.annotations.enums;version="2.1.12",io.swagger.v3.oas.ann

otations.extensions;version="2.1.12",io.swagger.v3.oas.annotations.headers;uses:"io.swagger.v3.oas.annotations.media";version="2.1.12",io.swagger.v3.oas.annotations.info;uses:"io.swagger.v3.oas.annotations.extensions";version="2.1.12",io.swagger.v3.oas.annotations.links;uses:"io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.servers";version="2.1.12",io.swagger.v3.oas.annotations.media;uses:"io.swagger.v3.oas.annotations,io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.headers";version="2.1.12",io.swagger.v3.oas.annotations.parameters;uses:"io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.media";version="2.1.12",io.swagger.v3.oas.annotations.responses;uses:"io.swagger.v3.oas.annotations.extensions,io.swagger.v3.oas.annotations.headers,io.swagger.v3.oas.annotations.links,io.swagger.v3.oas.annotations.media";version="2.1.12",io.swagger.v3.oas.annotations.security;uses:"io.swagger.v3.oas.annotations.enums,io.swagger.v3.oas.annotations.extensions";version="2.1.12",io.swagger.v3.oas.annotations.servers;uses:"io.swagger.v3.oas.annotations.extensions";version="2.1.12",io.swagger.v3.oas.annotations.tags;uses:"io.swagger.v3.oas.annotations,io.swagger.v3.oas.annotations.extensions";version="2.1.12"

Bundle-Name: swagger-annotations

Bundle-Version: 2.1.12

Bundle-SCM: url="https://github.com/swagger-api/swagger-core/modules/swagger-annotations",connection="scm:git:git@github.com:swagger-api/swagger-core.git/modules/swagger-annotations",developer-connection="scm:git:git@github.com:swagger-api/swagger-core.git/modules/swagger-annotations",tag=HEAD

Created-By: Apache Maven 3.8.4

Build-Jdk: 1.8.0\_312

Found in path(s):

\* /opt/cola/permits/1340031602\_1654736977.0737062/0/swagger-annotations-2-1-12-jar/META-INF/MANIFEST.MF

## 1.92 wire-schema 3.7.0

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- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/ServiceElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/EnumElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/ExtensionsElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/Util.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/ExtendElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/MessageElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/OptionElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/TypeElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/ProtoFileElement.kt
- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/ProtoParser.kt

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- \* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/internal/SchemaEncoder.kt

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jar/commonMain/com/squareup/wire/schema/internal/parser/OptionReader.kt

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\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/jvmMain/com/squareup/wire/schema/CoreLoader.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/jvmMain/com/squareup/wire/schema/internal/UtilJVM.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/FileLinker.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/Loader.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/SemVer.kt

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jar/commonMain/com/squareup/wire/schema/SchemaException.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/Field.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/MarkSet.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/Options.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/MessageType.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/ProtoMember.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/Service.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/OneOf.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/Rpc.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/EnumType.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/SchemaProtoAdapterFactory.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/ProtoType.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-

jar/commonMain/com/squareup/wire/schema/PruningRules.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Extend.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Schema.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/EnumConstant.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Location.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/ProtoFile.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Pruner.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Type.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Extensions.kt  
\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/Linker.kt

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\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/EnumConstantElement.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/OneOfElement.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/FieldElement.kt

\* /opt/cola/permits/1473577674\_1668493704.7653778/0/wire-schema-3-7-0-sources-jar/commonMain/com/squareup/wire/schema/internal/parser/RpcElement.kt

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This product optionally depends on 'lzma-java', a LZMA Java compression and decompression library, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.lzma-java.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* <https://github.com/jponge/lzma-java>

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- \* HOMEPAGE:
  - \* <https://github.com/luben/zstd-jni>

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- \* HOMEPAGE:
  - \* <https://code.google.com/p/jfastlz/>

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- \* HOMEPAGE:
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  - \* <https://github.com/google/snappy>

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  - \* <https://github.com/jboss-remoting/jboss-marshalling>

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- \* HOMEPAGE:
  - \* <https://github.com/google/caliper>

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- \* HOMEPAGE:
  - \* <https://commons.apache.org/logging/>

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- \* HOMEPAGE:
  - \* <https://logging.apache.org/log4j/>

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- \* HOMEPAGE:
  - \* <https://wiki.fasterxml.com/AaltoHome>

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  - \* <https://github.com/python-hyper/hpack/>

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  - \* <https://github.com/nghttp2/nghttp2/>

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  - \* <https://commons.apache.org/proper/commons-lang/>

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- \* HOMEPAGE:
  - \* <https://github.com/takari/maven-wrapper>

This product contains the dnsinfo.h header file, that provides a way to retrieve the system DNS configuration on MacOS.

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\* <https://www.opensource.apple.com/source/configd/configd-453.19/dnsinfo/dnsinfo.h>

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\* HOMEPAGE:

\* <https://github.com/hyperxpro/Brotli4j>

Protocol Buffers - Google's data interchange format

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# 1.94 testcontainers-core 1.16.2

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ibmcom/db2:11.5.0.0a

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neo4j:3.5.0-enterprise

a

b

mcr.microsoft.com/mssql/server:2017-CU12

## 1.95 jackson-datatype-joda 2.13.3

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## 1.96 micronaut-security 3.5.0

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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/x509/X509AuthenticationArgumentBinder.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/ControllerConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/SensitiveEndpointRule.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/x509/X509AuthenticationFetcher.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/x509/X509ConfigurationProperties.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/AbstractOutgoingRequestProcessorMatcher.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/x509/X509Configuration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/utils/LoggingUtils.java  
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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/ServerAuthentication.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AbstractPrincipalArgumentBinder.java  
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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/introspection/IntrospectionRequest.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/validator/TokenValidator.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/handlers/LoginHandler.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/BasicAuthUtils.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationMode.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/filters/AuthenticationFetcher.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/generator/TokenGenerator.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/ConfigurationInterceptUrlMapRule.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/SecurityRuleResult.java

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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/TokenAuthenticationFetcher.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/AbstractSecurityRule.java

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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/reader/HttpHeaderTokenReader.java

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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/BasicAuthAuthenticationConfiguration.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/config/package-info.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/TokenPropagator.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/refresh/RefreshTokenPersistence.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/ErrorCode.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/introspection/IntrospectionConfigurationProperties.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/Authentication.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/AuthenticationStrategy.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/reader/TokenResolver.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/reader/DefaultTokenResolver.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/LogoutControllerConfigurationProperties.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/TokenAuthenticationFactory.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/introspection/IntrospectionConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/BasicAuthAuthenticationFetcher.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/generator/RefreshTokenGenerator.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/filters/SecurityFilter.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/config/TokenConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/SecurityRule.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/reader/TokenReader.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/Claims.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/filters/package-info.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/TokenCookieConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationFailed.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/jackson/SecurityJacksonModule.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/DefaultAuthorizationExceptionHandler.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/SecurityConfiguration.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/ObtainingAuthorizationErrorCode.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/introspection/IntrospectionController.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/introspection/IntrospectionResponse.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/RefreshRedirectConfiguration.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/HttpHeaderTokenPropagatorConfigurationProperties.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/OauthErrorResponseException.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/InterceptUrlMapRule.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationFailureReason.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationProvider.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/rules/package-info.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/validator/RefreshTokenValidator.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthorizationException.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/CookiePriorToLoginPersistence.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/ForbiddenRedirectConfiguration.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/RedirectConfigurationProperties.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/OauthErrorResponseExceptionHandler.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/MapClaims.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/TokenPropagationHttpClientFilter.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/event/AccessTokenGeneratedEvent.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/event/TokenValidatedEvent.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/DefaultRolesFinder.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/UnauthorizedRedirectConfiguration.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/package-info.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationException.java

\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/package-info.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/errors/ErrorResponse.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/AuthenticationModeConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/x509/package-info.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/RedirectConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationExceptionHandler.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/AuthenticationArgumentBinder.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/authentication/CookieBasedAuthenticationModeCondition.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/package-info.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/TokenPropagationConfigurationProperties.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/LoginControllerConfigurationProperties.java  
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\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/endpoints/LoginControllerConfiguration.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/event/LoginSuccessfulEvent.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/config/InterceptUrlMapConverter.java  
\* /opt/cola/permits/1331474204\_1653068520.815044/0/micronaut-security-3-5-0-sources-jar/io/micronaut/security/token/propagation/TokenPropagationConfiguration.java

## 1.97 jmes-path-query-library 1.12.192

### 1.97.1 Available under license :

No license file was found, but licenses were detected in source scan.

<name>Apache License, Version 2.0</name>

Found in path(s):

\* /opt/cola/permits/1473592108\_1668797694.807343/0/jmespath-java-1-12-192-jar/META-INF/maven/com.amazonaws/jmespath-java/pom.xml

# 1.98 hamcrest 1.3

## 1.98.1 Available under license :

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</HEAD>

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<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
```

```
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>EasyMock License</title>
<link rel="stylesheet" href="easymock.css" />
</head>
```

```
<body><div class="bodywidth">
```

```
<h2>
EasyMock 2 License (MIT License)
</h2>
```

```
<em>Copyright (c) 2001-2006 <a href="http://www.offis.de">OFFIS</a>, <a
href="http://www.tammofreese.de">Tammo Freese</a>.</em>
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</p>
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<p>
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</p>
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<p>
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</p>

</div>

</body>

</html>

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# 1.101 fabric8-::-kubernetes-model-::-api- extensions 4.10.3

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- \* /opt/cola/permits/1473577662\_1668493658.076706/0/hystrix-serialization-1-5-18-sources-1-jar/com/netflix/hystrix/serial/SerialHystrixConfiguration.java
- \* /opt/cola/permits/1473577662\_1668493658.076706/0/hystrix-serialization-1-5-18-sources-1-jar/com/netflix/hystrix/serial/SerialHystrixRequestEvents.java
- \* /opt/cola/permits/1473577662\_1668493658.076706/0/hystrix-serialization-1-5-18-sources-1-jar/com/netflix/hystrix/serial/SerialHystrixUtilization.java
- \* /opt/cola/permits/1473577662\_1668493658.076706/0/hystrix-serialization-1-5-18-sources-1-jar/com/netflix/hystrix/serial/SerialHystrixDashboardData.java

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## 1.103 akka-parsing 10.1.12

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\* A very fast and memory efficient class to encode and decode to and from BASE64 in full accordance

\* with RFC 2045.<br><br>

\* On Windows XP sp1 with 1.4.2\_04 and later ;), this encoder and decoder is about 10 times faster

\* on small arrays (10 - 1000 bytes) and 2-3 times as fast on larger arrays (10000 - 1000000 bytes)

\* compared to `sun.misc.Encoder()/Decoder()`.

\* On byte arrays the encoder is about 20% faster than Jakarta Commons Base64 Codec for encode and about 50% faster for decoding large arrays. This implementation is about twice as fast on very small arrays (< 30 bytes). If source/destination is a `String` this version is about three times as fast due to the fact that the Commons Codec result has to be recoded to a `String` from `byte[]`, which is very expensive.

\* This encode/decode algorithm doesn't create any temporary arrays as many other codecs do, it only allocates the resulting array. This produces less garbage and it is possible to handle arrays twice as large as algorithms that create a temporary array. (E.g. Jakarta Commons Codec). It is unknown whether Sun's `sun.misc.Encoder()/Decoder()` produce temporary arrays but since performance is quite low it probably does.

\* The encoder produces the same output as the Sun one except that the Sun's encoder appends a trailing line separator if the last character isn't a pad. Unclear why but it only adds to the length and is probably a side effect. Both are in conformance with RFC 2045 though.

\* Commons codec seem to always add a trailing line separator.

\* **Note!**

\* The encode/decode method pairs (types) come in three versions with the **exact** same algorithm and thus a lot of code redundancy. This is to not create any temporary arrays for transcoding to/from different format types. The methods not used can simply be commented out.

\* There is also a "fast" version of all decode methods that works the same way as the normal ones, but has a few demands on the decoded input. Normally though, these fast versions should be used if the source if the input is known and it hasn't been tampered with.

\* If you find the code useful or you find a bug, please send me a note at [base64 @ miginfocom . com](mailto:base64@miginfocom.com).

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\* OF SUCH DAMAGE.  
\*  
\* @version 2.2  
\* @author Mikael Grev  
\*     Date: 2004-aug-02  
\*     Time: 11:31:11  
\*  
\* Adapted in 2009 by Mathias Doenitz.  
\*/

Found in path(s):

\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-  
jar/akka/parboiled2/util/Base64.java

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jar/akka/shapeless/ops/hlists.scala

\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/shapeless/hlists.scala

\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/shapeless/syntax/hlists.scala

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\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/package.scala

\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/ParseError.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/RunResult.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/RuleDSLActions.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/ActionOps.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/RuleDSLBasics.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/Parser.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/Lifter.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/DynamicRuleDispatch.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/ValueStack.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/ActionOpsSupport.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/OpTreeContext.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/CharUtils.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/CharPredicate.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/Unpack.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/Rule.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/ErrorFormatter.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/ParserInput.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/TailSwitch.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/support/HListable.scala  
\* /opt/cola/permits/1473592083\_1668494842.3813112/0/akka-parsing-2-11-10-1-12-sources-jar/akka/parboiled2/RuleDSLCombinators.scala

## 1.104 opentracing-api 0.31.0

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\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/META-INF/maven/io.opentracing/opentracing-api/pom.xml

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\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/propagation/TextMapInjectAdapter.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/propagation/TextMapExtractAdapter.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/References.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/Scope.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/tag/IntOrStringTag.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/tag/StringTag.java

\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-

jar/io/opentracing/tag/AbstractTag.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/propagation/Format.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/Tracer.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/Span.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/tag/Tags.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/tag/BooleanTag.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/log/Fields.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/propagation/TextMap.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/ScopeManager.java  
\* /opt/cola/permits/1131856260\_1613029791.21/0/opentracing-api-0-31-0-sources-3-jar/io/opentracing/SpanContext.java

## 1.105 jersey-inject-hk2 2.35

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```

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/ActionN.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/BehaviorSubject.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observers/SafeSubscriber.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-

jar/rx/internal/operators/OperatorOnBackpressureDrop.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/exceptions/CompositeException.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/schedulers/NewThreadScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/CompletableOnSubscribeMergeArray.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorMaterialize.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Func2.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/observables/GroupedObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorTakeUntil.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action4.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/CompletableOnSubscribeConcat.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorTakeLast.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/Observer.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/schedulers/CachedThreadScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action5.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/plugins/RxJavaErrorHandler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorZip.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/RxRingBuffer.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorToObservableList.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/observers/Observers.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/CompletableOnSubscribeConcatArray.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/CompletableOnSubscribeMergeIterable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/subscriptions/Subscriptions.java  
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jar/rx/subscriptions/BooleanSubscription.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorSkipLastTimed.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorSkip.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action7.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/BlockingOperatorToFuture.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorTake.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorUnsubscribeOn.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/Subscriber.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action0.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/LinkedList.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/SubjectSubscriptionManager.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorTakeLastTimed.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/exceptions/UnsubscribeFailedException.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/schedulers/TestScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action1.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observers/TestObserver.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorAny.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorScan.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/EventLoopsScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/PublishSubject.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleOperatorCast.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeDoOnEach.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/ImmediateScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observables/ConnectableObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/CachedObservable.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-

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jar/rx/internal/operators/OperatorIgnoreElements.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeSingle.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorOnBackpressureBuffer.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorOnErrorResumeNextViaFunction.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/exceptions/OnErrorThrowable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/schedulers/NewThreadScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/ScalarSynchronousObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action3.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeRedo.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/SerializedSubject.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/Completable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/TrampolineScheduler.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeGroupJoin.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeFilter.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorSkipLast.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/UnicastSubject.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeFromArray.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Action8.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/AsyncSubject.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observables/SyncOnSubscribe.java  
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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/CompletableOnSubscribeMerge.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Func3.java

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This package contains code that relies on sun.misc.Unsafe. Before using it you MUST assert  
UnsafeAccess.isUnsafeAvailable() == true

Much of the code in this package comes from or is inspired by the JCTools project:  
<https://github.com/JCTools/JCTools>

JCTools has now published artifacts (<https://github.com/JCTools/JCTools/issues/17>) so RxJava could add JCTools as a "shadow" dependency (<https://github.com/ReactiveX/RxJava/issues/1735>).

RxJava has a "zero dependency" policy for the core library, so if we do add it as a dependency, it won't be an externally visible dependency that results in a separate jar.

The license for the JCTools code is <https://github.com/JCTools/JCTools/blob/master/LICENSE>

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```

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```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/SingleTimeout.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OnSubscribeOnAssemblySingle.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observers/package-
info.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/SingleFromObservable.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/ObserverSubscriber.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/observers/AssertableSubscriberObservable.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/ActionSubscriber.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/plugins/RxJavaSingleExecutionHook.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/SingleFromCallable.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OnSubscribeLift.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/annotations/package-
info.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/observers/AsyncCompletableSubscriber.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/plugins/RxJavaCompletableExecutionHook.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/SingleOnErrorReturn.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
```

jar/rx/internal/operators/OnSubscribeDetach.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleTakeUntilCompletable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/exceptions/package-  
info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeFlattenIterable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/functions/Cancellable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleTakeUntilObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/Emitter.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/EmptyObservableHolder.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleDoOnUnsubscribe.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/exceptions/AssemblyStackTraceException.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/ActionNotificationObserver.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subscriptions/package-  
info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/schedulers/SchedulePeriodicHelper.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/InternalObservableUtils.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeOnAssemblyCompletable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observables/package-  
info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/BackpressureOverflow.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleObserveOn.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeOnAssembly.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/plugins/RxJavaHooks.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/package-  
info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleFromFuture.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/plugins/package-  
info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleLiftObservableOperator.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/subjects/package-  
info.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleToObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleFromEmitter.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleDelay.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/SchedulerWhen.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeThrow.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/ActionObserver.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/subscriptions/CancellableSubscription.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleTakeUntilSingle.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/subscriptions/Unsubscribed.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleDoOnSubscribe.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/NeverObservableHolder.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observers/AssertableSubscriber.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/observers/SafeCompletableSubscriber.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/CompletableFlatMapSingleToCompletable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/singles/package-info.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeCreate.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/plugins/RxJavaSingleExecutionHookDefault.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/GenericScheduledExecutorServiceFactory.java

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\* Modified from <http://www.javacodegeeks.com/2013/08/simple-and-lightweight-pool-implementation.html>

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/unsafe/MessagePassingQueue.java

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\*/

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\*/

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jar/rx/internal/util/unsafe/QueueProgressIndicators.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/DeferredScalarSubscriberSafe.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/SuppressAnimalSniffer.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeFromCallable.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/SchedulerLifecycle.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/ExceptionsUtils.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeReduceSeed.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeConcatMap.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/DeferredScalarSubscriber.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleOperatorOnErrorResumeNext.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleOnSubscribeUsing.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeReduce.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/SingleOperatorZip.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeTakeLastOne.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribePublishMulticast.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/producers/SingleProducer.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/BackpressureUtils.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/producers/ProducerArbiter.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/producers/SingleDelayedProducer.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorBufferWithSingleObservable.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OnSubscribeTimerOnce.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/schedulers/ExecutorScheduler.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorWindowWithObservable.java

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorDistinctUntilChanged.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/OperatorRetryWithPredicate.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-

jar/rx/internal/operators/OnSubscribeSkipTimed.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorDelayWithSelector.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/schedulers/ScheduledAction.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorTakeTimed.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorBufferWithTime.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeRefCount.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/atomic/SpSCLinkedArrayQueue.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorDistinct.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorDebounceWithSelector.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorDebounceWithTime.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeDelaySubscriptionWithSelector.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/schedulers/NewThreadWorker.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorBufferWithSize.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorWindowWithStartEndObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/SingleOnSubscribeDelaySubscriptionOther.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/PlatformDependent.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/RxThreadFactory.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorBufferWithStartEndObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorDoAfterTerminate.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorSwitch.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorWithLatestFrom.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OnSubscribeDelaySubscriptionOther.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorWindowWithSize.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/operators/OperatorSampleWithObservable.java  
\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-

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jar/rx/internal/operators/OperatorOnBackpressureLatest.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OperatorEagerConcatMap.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OperatorWindowWithObservableFactory.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OperatorSampleWithTime.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OperatorWindowWithTime.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/functions/Actions.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OperatorSkipUntil.java
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jar/rx/singles/BlockingSingle.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/observables/AsyncOnSubscribe.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/SingleDoAfterTerminate.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/BlockingUtils.java
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```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/OnSubscribeCombineLatest.java
```

```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/Single.java
```

No license file was found, but licenses were detected in source scan.

```
/*
```

```
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```

```
*
```

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```
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```
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```

```
*/
```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/CompletableEmitter.java
```

```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/operators/CompletableFromEmitter.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/CompletableSubscriber.java
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/SingleEmitter.java
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```

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* Original location: https://github.com/JCTools/JCTools/blob/master/jctools-
core/src/main/java/org/jctools/queues/SpseLinkedQueue.java
*/
```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/unsafe/SpseLinkedQueue.java
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```

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* Original location: https://github.com/JCTools/JCTools/blob/master/jctools-
core/src/main/java/org/jctools/queues/SpseArrayQueue.java
*/
```

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/unsafe/SpSCArrayQueue.java

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\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/unsafe/MpscLinkedQueue.java

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Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/operators/package.html

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core/src/main/java/org/jctools/queues/atomic/SpSCAtomicArrayQueue.java
 */
```

Found in path(s):

```
*/opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/atomic/SpSCAtomicArrayQueue.java
*/opt/ws_local/PERMITS_SQL/1014221113_1591382734.95/0/rxjava-1-3-8-sources-
jar/rx/internal/util/atomic/SpSCExactAtomicArrayQueue.java
```

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 * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
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 */
/**
 * This plugin class provides 2 ways to customize {@link Scheduler} functionality
 * 1. You may redefine entire schedulers, if you so choose. To do so, override
 * the 3 methods that return Scheduler (io(), computation(), newThread()).
 * 2. You may wrap/decorate an {@link Action0}, before it is handed off to a Scheduler. The system-
 * supplied Schedulers (Schedulers.ioScheduler, Schedulers.computationScheduler,
 * Scheduler.newThreadScheduler) all use this hook, so it's a convenient way to
 * modify Scheduler functionality without redefining Schedulers wholesale.
 */
```

\*  
\* Also, when redefining Schedulers, you are free to use/not use the onSchedule decoration hook.  
\* <p>  
\* See { @link RxJavaPlugins } or the RxJava GitHub Wiki for information on configuring plugins:  
\* <a  
href="https://github.com/ReactiveX/RxJava/wiki/Plugins">https://github.com/ReactiveX/RxJava/wiki/Plugins</a>.  
\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/plugins/RxJavaSchedulersHook.java

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\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-  
jar/rx/internal/util/ScalarSynchronousSingle.java

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\* Originally from [https://code.google.com/p/guava-](https://code.google.com/p/guava-libraries/source/browse/guava/src/com/google/common/annotations/Beta.java)

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Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/annotations/Beta.java

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\* Original location: <https://github.com/JCTools/JCTools/blob/master/jctools-core/src/main/java/org/jctools/queues/SpSCUnboundedArrayQueue.java>

\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/unsafe/SpSCUnboundedArrayQueue.java

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\* Original location: <https://github.com/JCTools/JCTools/blob/master/jctools-core/src/main/java/org/jctools/queues/atomic/SpSCLinkedAtomicQueue.java>

\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/atomic/SpSCLinkedAtomicQueue.java

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\* Original location: <https://github.com/JCTools/JCTools/blob/master/jctools-core/src/main/java/org/jctools/queues/LinkedQueueNode.java>  
\*/

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1014221113\_1591382734.95/0/rxjava-1-3-8-sources-jar/rx/internal/util/atomic/LinkedQueueNode.java

# 1.107 zjsonpatch 0.3.0

## 1.107.1 Available under license :

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```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
```

```
  <groupId>com.flipkart.zjsonpatch</groupId>
  <artifactId>zjsonpatch</artifactId>
  <version>0.3.0</version>
  <packaging>jar</packaging>
```

```
  <name>zjsonpatch</name>
  <description>Java Library to find / apply JSON Patches according to RFC 6902</description>
  <url>https://github.com/flipkart-incubator/zjsonpatch/</url>
```

```
  <scm>
    <connection>scm:git:https://github.com/flipkart-incubator/zjsonpatch.git</connection>
    <developerConnection>scm:git:https://github.com/flipkart-incubator/zjsonpatch.git</developerConnection>
    <tag>HEAD</tag>
    <url>https://github.com/flipkart-incubator/zjsonpatch</url>
  </scm>
```

```
  <developers>
    <developer>
      <id>vishwakarma</id>
      <name>Gopi Vishwakarma</name>
      <email>vishwakarma.iiita@gmail.com</email>
    </developer>
  </developers>
```

```
  <licenses>
    <license>
      <name>The Apache Software License, Version 2.0</name>
      <url>http://www.apache.org/licenses/LICENSE-2.0.txt</url>
      <distribution>repo</distribution>
    </license>
  </licenses>
```

```

    </license>
</licenses>

<properties>
  <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  <jackson.version>2.8.5</jackson.version>
</properties>

<build>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>2.3.1</version>
      <configuration>
        <source>1.6</source>
        <target>1.6</target>
        <showDeprecation>>true</showDeprecation>
        <showWarnings>>true</showWarnings>
      </configuration>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-source-plugin</artifactId>
      <version>2.2.1</version>
      <executions>
        <execution>
          <id>attach-sources</id>
          <goals>
            <goal>jar-no-fork</goal>
          </goals>
        </execution>
      </executions>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-javadoc-plugin</artifactId>
      <version>2.9.1</version>
      <executions>
        <execution>
          <id>attach-javadocs</id>
          <goals>
            <goal>jar</goal>
          </goals>
        </execution>
      </executions>
    </plugin>
  </plugins>
</build>

```

```

    <groupId>org.sonatype.plugins</groupId>
    <artifactId>nexus-staging-maven-plugin</artifactId>
    <version>1.6.3</version>
    <extensions>true</extensions>
    <configuration>
      <serverId>ossrh</serverId>
      <nexusUrl>https://oss.sonatype.org/</nexusUrl>
      <autoReleaseAfterClose>true</autoReleaseAfterClose>
    </configuration>
  </plugin>
  <plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-gpg-plugin</artifactId>
    <version>1.4</version>
    <executions>
      <execution>
        <id>sign-artifacts</id>
        <phase>verify</phase>
        <goals>
          <goal>sign</goal>
        </goals>
      </execution>
    </executions>
  </plugin>
  <plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-release-plugin</artifactId>
    <version>2.5</version>
    <configuration>
      <autoVersionSubmodules>true</autoVersionSubmodules>
      <useReleaseProfile>>false</useReleaseProfile>
      <releaseProfiles>release</releaseProfiles>
      <goals>deploy</goals>
    </configuration>
  </plugin>
</plugins>
</build>
<dependencies>
  <dependency>
    <groupId>com.fasterxml.jackson.core</groupId>
    <artifactId>jackson-databind</artifactId>
    <version>${jackson.version}</version>
  </dependency>
  <dependency>
    <groupId>com.fasterxml.jackson.core</groupId>
    <artifactId>jackson-core</artifactId>
    <version>${jackson.version}</version>
  </dependency>

```

```

<dependency>
  <groupId>com.google.guava</groupId>
  <artifactId>guava</artifactId>
  <version>18.0</version>
</dependency>
<dependency>
  <scope>test</scope>
  <groupId>commons-io</groupId>
  <artifactId>commons-io</artifactId>
  <version>2.4</version>
</dependency>
<dependency>
  <scope>test</scope>
  <groupId>junit</groupId>
  <artifactId>junit</artifactId>
  <version>4.12</version>
</dependency>
<dependency>
  <groupId>org.apache.commons</groupId>
  <artifactId>commons-collections4</artifactId>
  <version>4.1 </version>
</dependency>
</dependencies>
<distributionManagement>
  <snapshotRepository>
    <id>ossrh</id>
    <url>https://oss.sonatype.org/content/repositories/snapshots</url>
  </snapshotRepository>
  <repository>
    <id>ossrh</id>
    <url>https://oss.sonatype.org/service/local/staging/deploy/maven2/</url>
  </repository>
</distributionManagement>
</project>

```

Found in path(s):

\* /opt/cola/permits/1288519755\_1647351836.02/0/zjsonpatch-0-3-0-jar/META-INF/maven/com.flipkart.zjsonpatch/zjsonpatch/pom.xml

## 1.108 jackson-datatype-guava 2.13.3

### 1.108.1 Available under license :

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## 1.109 jackson-integration-for-metrics 4.1.29

### 1.109.1 Available under license :

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Manifest-Version: 1.0

Automatic-Module-Name: com.codahale.metrics.json

Build-Jdk-Spec: 1.8

Bundle-Description: A set of Jackson modules which provide serializers for most Metrics classes.

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.html>

Bundle-ManifestVersion: 2

Bundle-Name: Jackson Integration for Metrics

Bundle-SymbolicName: io.dropwizard.metrics.json

Bundle-Version: 4.1.29

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.json;uses:="com.codahale.metrics, com.fasterxml.jackson.core,com.fasterxml.jackson.databind";version="4.1.29"

Implementation-Title: Jackson Integration for Metrics

Implementation-Version: 4.1.29

Import-Package: com.codahale.metrics;version="[4.1,5)",com.codahale.metrics.health;version="[4.1,5)";resolution:=optional,com.fasterxml.jackson.core;version="[2.9,3)",com.fasterxml.jackson.databind;version="[2.9,3)",com.fasterxml.jackson.databind.module;version="[2.9,3)",com.fasterxml.jackson.databind.ser;version="[2.9,3)",com.fasterxml.jackson.databind.ser.std;version="[2.9,3)"

Require-Capability: osgi.ee:filter="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473592329\_1668797197.4932332/0/metrics-json-4-1-29-jar/META-INF/MANIFEST.MF

## 1.110 fabric8-::-kubernetes-model-::-settings

### 4.10.3

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## 1.111 netty/transport/classes/kqueue

### 4.1.76.Final

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```
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-->
```

Found in path(s):

```
* /opt/cola/permits/1473592208_1668798304.6474621/0/netty-transport-classes-kqueue-4-1-76-final-jar/META-INF/maven/io.netty/netty-transport-classes-kqueue/pom.xml
```

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Manifest-Version: 1.0

Implementation-Title: Netty/Transport/Classes/KQueue

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.transport.classes.kqueue

Bundle-License: https://www.apache.org/licenses/LICENSE-2.0

Bundle-SymbolicName: io.netty.transport-classes-kqueue

Implementation-Version: 4.1.76.Final

Built-By: chris

Bnd-LastModified: 1649788190018

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>  
Bundle-Vendor: The Netty Project  
Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel,io.netty.channel.socket;version="[4.1,5)",io.netty.channel.unix;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.collection;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-2.4.1.201501161923  
Implementation-Vendor: The Netty Project  
Export-Package: io.netty.channel.kqueue;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.socket,io.netty.channel.unix,io.netty.util.concurrent";version="4.1.76"  
Bundle-Name: Netty/Transport/Classes/KQueue  
Bundle-Version: 4.1.76.Final  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_312  
Implementation-URL: <https://netty.io/netty-transport-classes-kqueue/>

Found in path(s):

\* /opt/cola/permits/1473592208\_1668798304.6474621/0/netty-transport-classes-kqueue-4-1-76-final-jar/META-INF/MANIFEST.MF

## 1.112 junit-platform-junit-platform-commons

### 1.8.2

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```
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  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
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```

```
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```
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```

```
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```

```
  <version>5.5.5</version>
```

```
</parent>
```

```
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```

```
  <license>
```

```
    <name>Confluent Community License</name>
```

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    <url>http://www.confluent.io/confluent-community-license</url>
```

```
    <distribution>repo</distribution>
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  <license>
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```
    <name>Apache License 2.0</name>
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    <url>http://www.apache.org/licenses/LICENSE-2.0.html</url>
```

```
    <distribution>repo</distribution>
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```
  </license>
```

```
</licenses>
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```

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      <artifactId>protoc-jar-maven-plugin</artifactId>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-jar-plugin</artifactId>
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        <execution>
          <goals>
            <goal>test-jar</goal>
          </goals>
          <phase>test-compile</phase>
        </execution>
      </executions>
    </plugin>
  </plugins>
</build>
</project>

```

Found in path(s):

\* /opt/cola/permits/1340031763\_1654757661.098579/0/kafka-protobuf-serializer-5-5-5-jar/META-INF/maven/io.confluent/kafka-protobuf-serializer/pom.xml

## 1.114 testng 6.14.3

## 1.115 jersey-ext-metainf-services 2.33

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# 1.116 metrics-utility-servlets 4.0.5

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Manifest-Version: 1.0

Bnd-LastModified: 1545938238563

Build-Jdk: 1.8.0\_191

Built-By: artem

Bundle-Description: A set of utility servlets for Metrics, allowing you to expose valuable information about your production environment.

Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>

Bundle-ManifestVersion: 2

Bundle-Name: Metrics Utility Servlets

Bundle-SymbolicName: io.dropwizard.metrics.servlets

Bundle-Version: 4.0.5

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.servlets;uses:="com.codahale.metrics,com.codahale.metrics.health,javax.servlet,javax.servlet.http";version="4.0.5"

Implementation-Title: Metrics Utility Servlets

Implementation-URL: <http://metrics.dropwizard.io/metrics-servlets>

Implementation-Vendor-Id: io.dropwizard.metrics

Implementation-Version: 4.0.5

Import-Package: javax.servlet;version="[2.5.0,4.0.0)",javax.servlet.ht  
tp;version="[2.5.0,4.0.0)",com.codahale.metrics;version="[4.0,5)",com  
.codahale.metrics.health;version="[4.0,5)",com.codahale.metrics.json;  
version="[4.0,5)",com.codahale.metrics.jvm;version="[4.0,5)",com.fast  
erxml.jackson.databind;version="[2.9,3)",com.fasterxml.jackson.databi  
nd.util;version="[2.9,3)",com.papertrail.profiler.org.joda.time;versi  
on="[2.9,3)"

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1274701310\_1648835822.95/0/metrics-servlets-4-0-5-jar/META-INF/MANIFEST.MF

# 1.117 leveldb 0.12

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# 1.118 project-lombok 1.18.8

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# 1.119 jakarta-expression-language-3.0-implementation 4.0.2

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## END OF TERMS AND CONDITIONS

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## 1.123 geantyref 1.3.13

### 1.123.1 Available under license :

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0

Bundle-Description: Generic type reflection library with support for AnnotatedType

Automatic-Module-Name: io.leangen.geantyref

Bundle-License: "The Apache Software License, Version 2.0";link="http://www.apache.org/licenses/LICENSE-2.0.txt"

Bundle-SymbolicName: io.leangen.geantyref.geantyref

Bnd-LastModified: 1636765501077

Bundle-ManifestVersion: 2

Bundle-DocURL: https://github.com/leangen/geantyref

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-6.0.0.202110041835

Export-Package: io.leangen.geantyref;version="1.3.1"

Bundle-Name: GeantyRef

Bundle-Version: 1.3.13

Bundle-SCM: url="https://github.com/leangen/geantyref",connection="scm:git:git://github.com/leangen/geantyref",developer-connection="scm:git:git://github.com/leangen/geantyref",tag="geantyref-v1.3.13"

Build-Jdk-Spec: 1.8

Created-By: 1.8.0\_281 (Oracle Corporation)

Found in path(s):

\* /opt/cola/permits/1341639953\_1654785812.4849956/0/geantyref-1-3-13-jar/META-INF/MANIFEST.MF

No license file was found, but licenses were detected in source scan.

```

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>io.leangen.geantyref</groupId>
  <artifactId>geantyref</artifactId>
  <packaging>jar</packaging>
  <version>1.3.13</version>

  <inceptionYear>2016</inceptionYear>
  <name>GeantyRef</name>
  <url>https://github.com/leangen/geantyref</url>
  <description>Generic type reflection library with support for AnnotatedType</description>
  <licenses>
    <license>
      <name>The Apache Software License, Version 2.0</name>
      <url>http://www.apache.org/licenses/LICENSE-2.0.txt</url>
      <distribution>repo</distribution>
    </license>
  </licenses>

  <scm>
    <connection>scm:git:git://github.com/leangen/geantyref</connection>
    <developerConnection>scm:git:git://github.com/leangen/geantyref</developerConnection>
    <url>https://github.com/leangen/geantyref</url>
    <tag>geantyref-v1.3.13</tag>
  </scm>
  <distributionManagement>
    <repository>
      <id>ossrh</id>
      <url>https://oss.sonatype.org/service/local/staging/deploy/maven2/</url>
    </repository>
    <snapshotRepository>
      <id>ossrh</id>
      <url>https://oss.sonatype.org/content/repositories/snapshots</url>
    </snapshotRepository>
  </distributionManagement>
  <issueManagement>
    <system>GitHub Issue Tracking</system>
    <url>https://github.com/leangen/geantyref/issues</url>
  </issueManagement>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  </properties>

  <dependencies>
    <dependency>
      <groupId>junit</groupId>

```

```

    <artifactId>junit</artifactId>
    <version>4.13.2</version>
    <scope>test</scope>
  </dependency>
</dependencies>

<build>
  <defaultGoal>package</defaultGoal>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>3.8.1</version>
      <configuration>
        <source>1.8</source>
        <target>1.8</target>
      </configuration>
    </plugin>

    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-jar-plugin</artifactId>
      <version>3.2.0</version>
      <configuration>
        <archive>
          <manifestFile>${project.build.outputDirectory}/META-INF/MANIFEST.MF</manifestFile>
          <manifestEntries>
            <Automatic-Module-Name>io.leangen.geantyref</Automatic-Module-Name>
          </manifestEntries>
        </archive>
      </configuration>
    </plugin>

    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-release-plugin</artifactId>
      <version>2.5.3</version>
      <configuration>
        <goals>deploy</goals>
        <useReleaseProfile>>false</useReleaseProfile>
        <releaseProfiles>release</releaseProfiles>
        <pushChanges>>false</pushChanges>
        <tagNameFormat>geantyref-v@{project.version}</tagNameFormat>
      </configuration>
    </plugin>

    <plugin>
      <groupId>biz.aQute.bnd</groupId>

```

```

<artifactId>bnd-maven-plugin</artifactId>
<version>6.0.0</version>
<executions>
  <execution>
    <goals>
      <goal>bnd-process</goal>
    </goals>
  </execution>
</executions>
</plugin>
</plugins>
</build>

<profiles>
<profile>
  <id>release</id>
  <build>
    <plugins>
      <plugin>
        <inherited>>true</inherited>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-deploy-plugin</artifactId>
        <version>2.8.2</version>
        <configuration>
          <updateReleaseInfo>>true</updateReleaseInfo>
        </configuration>
      </plugin>

      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-source-plugin</artifactId>
        <version>3.2.1</version>
        <executions>
          <execution>
            <id>attach-sources</id>
            <phase>verify</phase>
            <goals>
              <goal>jar</goal>
            </goals>
          </execution>
        </executions>
      </plugin>

      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-javadoc-plugin</artifactId>
        <version>3.3.1</version>
        <executions>

```

```

        <execution>
          <id>attach-javadocs</id>
          <goals>
            <goal>jar</goal>
          </goals>
        </execution>
      </executions>
    </configuration>
    <links>
      <link>https://docs.oracle.com/javase/8/docs/api/</link>
    </links>
    <version>>true</version>
    <show>public</show>
  </configuration>
</plugin>

<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-gpg-plugin</artifactId>
  <version>3.0.1</version>
  <executions>
    <execution>
      <id>sign-artifacts</id>
      <phase>verify</phase>
      <goals>
        <goal>sign</goal>
      </goals>
    </execution>
  </executions>
  <configuration>
    <useAgent>>true</useAgent>
  </configuration>
</plugin>

<plugin>
  <groupId>org.sonatype.plugins</groupId>
  <artifactId>nexus-staging-maven-plugin</artifactId>
  <version>1.6.8</version>
  <extensions>>true</extensions>
  <configuration>
    <serverId>ossrh</serverId>
    <nexusUrl>https://oss.sonatype.org/</nexusUrl>
    <autoReleaseAfterClose>>true</autoReleaseAfterClose>
  </configuration>
</plugin>
</plugins>
</build>
</profile>

```

```
</profiles>

<developers>
  <developer>
    <name>Bojan Tomic</name>
    <email>veggen@gmail.com</email>
    <organization>Leangen</organization>
    <organizationUrl>http://leangen.io</organizationUrl>
  </developer>
</developers>
</project>
```

Found in path(s):

```
* /opt/cola/permits/1341639953_1654785812.4849956/0/geantyref-1-3-13-jar/META-
INF/maven/io.leangen.geantyref/geantyref/pom.xml
```

# 1.124 unboundid-scim2-sdk-common 2.3.6

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```
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 */
```

Found in path(s):

```
* /opt/cola/permits/1340031433_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-
jar/com/unboundid/scim2/common/utils/MapperFactory.java
* /opt/cola/permits/1340031433_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-
jar/com/unboundid/scim2/common/utils/JsonDiff.java
```

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```
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\*/

Found in path(s):

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/utils/DateSerializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/types/GroupResource.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/utils/DateTimeUtils.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/utils/DateDeserializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/utils/CalendarDeserializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/utils/CalendarSerializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-  
jar/com/unboundid/scim2/common/types/Member.java

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\*/

Found in path(s):

- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/GenericScimObjectSerializer.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/SchemaResource.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/package-info.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/ScimException.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/BulkConfig.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/ChangePasswordConfig.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/ForbiddenException.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/SortOrder.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/OrFilter.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/ErrorResponse.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/LessThanFilter.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/StaticUtils.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/ScimFilterJsonParser.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/NotEqualFilter.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/ETagConfig.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/PatchOperation.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/JsonUtils.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/JsonRefBeanSerializer.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/ScimJsonFactory.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/BaseScimResource.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/NotFilter.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/SchemaUtils.java
- \* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/NotModifiedException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/NotImplementedException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/GreaterThanFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/X509Certificate.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/UnauthorizedException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/JsonReference.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Meta.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/ResourceNotFoundException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Role.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/DebugType.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/PhoneNumber.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/CombiningFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/GenericScimObjectDeserializer.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/package-info.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/InstantMessagingAddress.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/GreaterThanOrEqualToFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Manager.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Photo.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/LessThanOrEqualToFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/EnterpriseUserExtension.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/GenericScimResource.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/package-info.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/FilterConfig.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/UserResource.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/StartsWithFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/StatusDeserializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/CaseIgnoreMap.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/ScimDateFormat.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/StatusSerializer.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/ServerErrorException.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/Filter.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/PreconditionFailedException.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/package-info.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/package-info.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/Parser.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/PatchRequest.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Name.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/ResourceTypeResource.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/PatchOpType.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/FilterVisitor.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/annotations/Schema.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/Path.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/ScimResource.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/ResourceConflictException.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Entitlement.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Group.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/annotations/Attribute.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/PresentFilter.java  
\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/FilterType.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/ListResponse.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/BadRequestException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/ApiConstants.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/annotations/package-info.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/EqualFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/ScimJsonNodeFactory.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/AndFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/SortConfig.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/AuthenticationScheme.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/Debug.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/messages/SearchRequest.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/AttributeDefinition.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/ContainsFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/ComplexValueFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/PatchConfig.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/FilterEvaluator.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/CaseIgnoreObjectNode.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/utils/package-info.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Address.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/Email.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/types/ServiceProviderConfigResource.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/ComparisonFilter.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/exceptions/MethodNotAllowedException.java

\* /opt/cola/permits/1340031433\_1654671331.583195/0/scim2-sdk-common-2-3-6-sources-jar/com/unboundid/scim2/common/filters/EndsWithFilter.java

# 1.125 kafka-schema-registry-client 5.5.5

## 1.125.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
<project xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://maven.apache.org/POM/4.0.0"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
```

```
<modelVersion>4.0.0</modelVersion>
```

```
<parent>
  <groupId>io.confluent</groupId>
  <artifactId>kafka-schema-registry-parent</artifactId>
  <version>5.5.5</version>
</parent>
```

```
<licenses>
  <license>
    <name>Apache License 2.0</name>
    <url>http://www.apache.org/licenses/LICENSE-2.0.html</url>
    <distribution>repo</distribution>
  </license>
</licenses>
```

```
<artifactId>kafka-schema-registry-client</artifactId>
<packaging>jar</packaging>
<name>kafka-schema-registry-client</name>
```

```
<dependencies>
  <dependency>
    <groupId>org.apache.kafka</groupId>
    <artifactId>kafka-clients</artifactId>
  </dependency>
  <dependency>
    <groupId>io.confluent</groupId>
    <artifactId>common-config</artifactId>
  </dependency>
```

```
<dependency>
  <groupId>org.apache.avro</groupId>
  <artifactId>avro</artifactId>
```

```
</dependency>
```

```
<dependency>
  <groupId>com.fasterxml.jackson.core</groupId>
  <artifactId>jackson-databind</artifactId>
```

```

</dependency>
<dependency>
  <groupId>jakarta.ws.rs</groupId>
  <artifactId>jakarta.ws.rs-api</artifactId>
</dependency>
<dependency>
  <groupId>org.glassfish.jersey.core</groupId>
  <artifactId>jersey-common</artifactId>
  <version>${jersey.version}</version>
</dependency>
<dependency>
  <groupId>org.easymock</groupId>
  <artifactId>easymock</artifactId>
  <scope>test</scope>
</dependency>
<dependency>
  <groupId>org.powermock</groupId>
  <artifactId>powermock-module-junit4</artifactId>
  <scope>test</scope>
</dependency>
<dependency>
  <groupId>org.powermock</groupId>
  <artifactId>powermock-api-easymock</artifactId>
  <scope>test</scope>
</dependency>
<dependency>
  <groupId>junit</groupId>
  <artifactId>junit</artifactId>
  <scope>test</scope>
</dependency>
<dependency>
  <groupId>io.swagger</groupId>
  <artifactId>swagger-annotations</artifactId>
</dependency>
<dependency>
  <groupId>com.google.guava</groupId>
  <artifactId>guava</artifactId>
  <scope>test</scope>
</dependency>
</dependencies>
</project>

```

Found in path(s):

\* /opt/cola/permits/1341639824\_1654785850.9168322/0/kafka-schema-registry-client-5-5-5-jar/META-INF/maven/io.confluent/kafka-schema-registry-client/pom.xml

# 1.126 launchdarkly-sdk-for-java 5.7.1

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`src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java`

contains test data from <http://aspell.net/test/orig/batch0.tab>.

Copyright (C) 2002 Kevin Atkinson ([kevina@gnu.org](mailto:kevina@gnu.org))

---

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# 1.127 jakarta-ws-rs-api 2.1.6

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\* License: Common Public License 1.0

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\* Project: <http://site.mockito.org>

\* Source: <https://github.com/mockito/mockito/releases/tag/v2.16.0>

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## 1.133 dropwizard-request-logging-support

### 2.0.28

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# 1.134 netty-tomcatnative-openssl-dynamic

## 2.0.51.Final

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\* /opt/cola/permits/1473592353\_1668798238.7776756/0/netty-tcnative-2-0-51-final-jar/META-INF/maven/io.netty/netty-tcnative/pom.xml

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Manifest-Version: 1.0

Implementation-Title: Netty/TomcatNative [OpenSSL - Dynamic]

Bundle-Description: A Mavenized fork of Tomcat Native which incorporates various patches. This artifact is dynamically linked to OpenSSL and Apache APR.

Automatic-Module-Name: io.netty.tcnative.openssl.osx-x86\_64

Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.txt>

Bundle-SymbolicName: io.netty.tcnative

Implementation-Version: 2.0.51.Final

Built-By: norman

Bnd-LastModified: 1646990978815

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Fragment-Host: io.netty.tcnative-classes

Tool: Bnd-5.1.1.202006162103

Implementation-Vendor: The Netty Project

Bundle-Name: Netty/TomcatNative [OpenSSL - Dynamic]

Bundle-Version: 2.0.51.Final

Build-Jdk-Spec: 1.8

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_252

Implementation-URL: <https://github.com/netty/netty-tcnative/netty-tcnative/>

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\* /opt/cola/permits/1473592353\_1668798238.7776756/0/netty-tcnative-2-0-51-final-jar/META-INF/MANIFEST.MF

## 1.135 jersey-media-json-jackson 2.35

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# 1.136 netty/tomcatnative-[openssl---classes]

## 2.0.51.Final

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Manifest-Version: 1.0

Implementation-Title: Netty/TomcatNative [BoringSSL - Static]

Bundle-Description: A Mavenized fork of Tomcat Native which incorporates various patches. This artifact is statically linked to BoringSSL and Apache APR.

Automatic-Module-Name: io.netty.tcnative.openssl.osx-x86\_64

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Bundle-SymbolicName: io.netty.tcnative-boringssl-static

Implementation-Version: 2.0.51.Final

Built-By: norman

Bnd-LastModified: 1646991568982

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Fragment-Host: io.netty.tcnative-classes  
Tool: Bnd-5.1.1.202006162103  
Implementation-Vendor: The Netty Project  
Bundle-Name: Netty/TomcatNative [BoringSSL - Static]  
Bundle-Version: 2.0.51.Final  
Build-Jdk-Spec: 1.8  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://github.com/netty/netty-tcnative/netty-tcnative-boringssl-static/>

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```

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\* /opt/cola/permits/1473577620\_1668493673.200625/0/hystrix-codahale-metrics-publisher-1-5-18-sources-jar/com/netflix/hystrix/contrib/codahalemetricspublisher/ConfigurableCodaHaleMetricFilter.java

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```
* /opt/cola/permits/1473577620_1668493673.200625/0/hystrix-codahale-metrics-publisher-1-5-18-sources-
jar/com/netflix/hystrix/contrib/codahalemetricspublisher/HystrixCodaHaleMetricsPublisherThreadPool.java
* /opt/cola/permits/1473577620_1668493673.200625/0/hystrix-codahale-metrics-publisher-1-5-18-sources-
jar/com/netflix/hystrix/contrib/codahalemetricspublisher/HystrixCodaHaleMetricsPublisher.java
* /opt/cola/permits/1473577620_1668493673.200625/0/hystrix-codahale-metrics-publisher-1-5-18-sources-
jar/com/netflix/hystrix/contrib/codahalemetricspublisher/HystrixCodaHaleMetricsPublisherCollapser.java
* /opt/cola/permits/1473577620_1668493673.200625/0/hystrix-codahale-metrics-publisher-1-5-18-sources-
jar/com/netflix/hystrix/contrib/codahalemetricspublisher/HystrixCodaHaleMetricsPublisherCommand.java
```

## 1.139 io-projectreactor 3.4.18

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/UnicastManySinkNoBackpressure.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxConcatMapNoPrefetch.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkOneSerialized.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/retry/RetrySpec.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/InternalManySink.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkEmptyMulticast.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/retry/RetryBackoffSpec.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/retry/ImmutableRetrySignal.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/ContextView.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/Timed.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/InternalOneSink.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinksSpecs.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkManyBestEffort.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/retry/Retry.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/InternalEmptySink.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkEmptySerialized.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/DelegatingScheduledExecutorService.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxTimed.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkManySerialized.java  
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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxUsingWhen.java

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- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/EmitterProcessor.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxBufferTimeout.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxGenerate.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxHandleFuseable.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoIgnoreThen.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxHandle.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxReplay.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoCreate.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SinkOneMulticast.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMapSignal.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxSink.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMap.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/SynchronousSink.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMapFuseable.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/Schedulers.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoExtensions.kt  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/function/TupleExtensions.kt  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/package-info.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxExtensions.kt  
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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/package-info.java  
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- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/CoreContext.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/ContextTrackingFunctionWrapper.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/annotation/NonNullApi.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/annotation/NonNull.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoCacheInvalidateIf.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxSwitchMapNoPrefetch.java

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- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoPublishMulticast.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/Context4.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/SchedulerTask.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/OperatorDisposables.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxDelaySequence.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxRefCountGrace.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoCacheTime.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/CoreSubscriber.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoFilterWhen.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxFilterWhen.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoDelayUntil.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/Scannable.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxExpand.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/PeriodicSchedulerTask.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/Context5.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/EmptyCompositeDisposable.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/Disposables.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxWindowTimeout.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/Context.java
- \* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxLimitRequest.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoWhen.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/DelegateServiceScheduler.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoExpand.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/StrictSubscriber.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/InstantPeriodicWorkerTask.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/PeriodicWorkerTask.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxOnBackpressureBufferTimeout.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/concurrent/Queues.java

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reactor.core.scheduler.ReactorBlockHoundIntegration

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/META-INF/services/reactor.blockhound.integration.BlockHoundIntegration

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/SchedulerMetricDecorator.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/concurrent/MpscLinkedQueue.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/QueueDrainSubscriber.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMergeComparing.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoMetricsFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/Traces.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoMetrics.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxSwitchOnFirst.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMetrics.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/OnNextFailureStrategy.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/ReactorThreadFactory.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxMetricsFuseable.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/ReactorBlockHoundIntegration.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/scheduler/BoundedElasticScheduler.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/ContextHolder.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/Context0.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/context/Context1.java

\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoJust.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/InnerOperator.java

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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/BufferOverflowStrategy.java  
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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoOnErrorResume.java  
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jar/reactor/core/publisher/FluxSubscribeOnValue.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxNameFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/ParallelLiftFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoDoFinally.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxErrorSupplied.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxRange.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxUsing.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoDoFirst.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoIgnoreElements.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoLogFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoTakeUntilOther.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/ParallelDoOnEach.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/scheduler/NonBlocking.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxPeekFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxDoFirstFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/ParallelLift.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/InnerProducer.java  
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jar/reactor/util/function/Tuples.java  
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jar/reactor/core/publisher/MonoRetryWhen.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxSourceFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoCallableOnAssembly.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxDistinctFuseable.java  
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jar/reactor/core/publisher/MonoContextWrite.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-

jar/reactor/core/publisher/MonoDefer.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxDelaySubscription.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoProcessor.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoSubscribeOnCallable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/GroupedLiftFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/adapters/JdkFlowAdapter.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoStreamCollector.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/util/function/Tuple5.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoIgnorePublisher.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/MonoDelayElement.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
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\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/SignalLogger.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/FluxTakeFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-  
jar/reactor/core/publisher/SerializedSubscriber.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-

jar/reactor/core/scheduler/ImmediateScheduler.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxTake.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoIgnoreElement.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxDistinctUntilChanged.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/ParallelMap.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/util/Logger.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxName.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxOnBackpressureLatest.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoSubscribeOnValue.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/BlockingSingleSubscriber.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxSample.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxJoin.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxWindow.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxIndexFuseable.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxPublishMulticast.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxLog.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoHandle.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/BaseSubscriber.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/FluxFirstWithValue.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoNext.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoPublishOn.java  
\* /opt/cola/permits/1427929591\_1664344023.2319765/0/reactor-core-3-4-18-sources-jar/reactor/core/publisher/MonoPeekFuseable.java

## 1.140 dropwizard-metrics-support 2.0.28

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# 1.141 micronaut-groovy 3.1.0

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```

Found in path(s):

```
* /opt/cola/permits/1331474157_1653512453.5913334/0/micronaut-runtime-groovy-3-1-0-sources-
jar/io/micronaut/context/env/groovy/SetPropertyTransformer.groovy
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* /opt/cola/permits/1331474157_1653512453.5913334/0/micronaut-runtime-groovy-3-1-0-sources-
jar/io/micronaut/context/env/groovy/GroovyPropertySourceLoader.java
* /opt/cola/permits/1331474157_1653512453.5913334/0/micronaut-runtime-groovy-3-1-0-sources-
jar/io/micronaut/context/env/groovy/package-info.java
```

# 1.142 opentelemetry 1.14.0

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- javaee\_web\_services\_client\_1\_2.xsd
- javaee\_6.xsd
- javaee\_web\_services\_1\_3.xsd
- javaee\_web\_services\_client\_1\_3.xsd
- jsp\_2\_2.xsd
- web-app\_3\_0.xsd
- web-common\_3\_0.xsd
- web-fragment\_3\_0.xsd
- javaee\_7.xsd
- javaee\_web\_services\_1\_4.xsd
- javaee\_web\_services\_client\_1\_4.xsd
- jsp\_2\_3.xsd
- web-app\_3\_1.xsd
- web-common\_3\_1.xsd
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- jakarta\_web-services\_client\_2\_0.xsd
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- web-commonn\_5\_0.xsd
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- javaee\_5.xsd
- javaee\_web\_services\_1\_2.xsd
- javaee\_web\_services\_client\_1\_2.xsd
- javaee\_6.xsd
- javaee\_web\_services\_1\_3.xsd
- javaee\_web\_services\_client\_1\_3.xsd
- jsp\_2\_2.xsd
- web-app\_3\_0.xsd
- web-common\_3\_0.xsd
- web-fragment\_3\_0.xsd
- javaee\_7.xsd
- javaee\_web\_services\_1\_4.xsd
- javaee\_web\_services\_client\_1\_4.xsd
- jsp\_2\_3.xsd
- web-app\_3\_1.xsd
- web-common\_3\_1.xsd
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```
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- \* /opt/cola/permits/1337070300\_1654792344.40951/0/java-agent-api-4-5-13-27526-zip/agent-api-javadoc-jar/com/appdynamics/agent/api/impl/package-summary.html
- \* /opt/cola/permits/1337070300\_1654792344.40951/0/java-agent-api-4-5-13-27526-zip/agent-api-javadoc-jar/com/appdynamics/agent/api/EntryTypes.html
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 */
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jar/com/appdynamics/agent/api/impl/NoOpTransaction.java
* /opt/cola/permits/1337070300_1654792344.40951/0/java-agent-api-4-5-13-27526-zip/agent-api-sources-
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* /opt/cola/permits/1337070300_1654792344.40951/0/java-agent-api-4-5-13-27526-zip/agent-api-sources-
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```
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```
* /opt/cola/permits/1337070300_1654792344.40951/0/java-agent-api-4-5-13-27526-zip/agent-api-sources-
jar/com/appdynamics/agent/api/bootstrap/NoOpTransactionDelegate.java
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# 1.149 asm-commons 7.2

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# 1.150 dropwizard-jersey-support 2.0.28

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# 1.151 latencyutils 2.0.3

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```
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# 1.152 scala-logging\_2.12 3.9.2

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# 1.153 kotlinx-coroutines-bom 1.5.1

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## 1.156 jackson-module-afterburner 2.13.3

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## 1.157 hk2-api-module 2.6.1

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## 4.1.73.Final

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```
* /opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
jar/io/netty/channel/unix/DomainDatagramChannelConfig.java
* /opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
```

jar/io/netty/channel/unix/SegmentedDatagramPacket.java

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\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/Limits.java

\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/netty\_unix\_limits.c  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/ErrorsStaticallyReferencedJniMethods.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/LimitsStaticallyReferencedJniMethods.java  
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\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/SocketWritableByteChannel.java  
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\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/DomainSocketChannelConfig.java  
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\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/DomainSocketChannel.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-

jar/netty\_unix\_errors.c  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/netty\_unix\_socket.h  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/netty\_unix\_filedescriptor.c  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/ServerDomainSocketChannel.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/Errors.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/DomainSocketReadMode.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/FileDescriptor.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/NativeInetAddress.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/UnixChannel.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/DatagramSocketAddress.java

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\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/Unix.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/IovArray.java  
\* /opt/cola/permits/1290493558\_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-jar/io/netty/channel/unix/UnixChannelOption.java

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```
*/opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
jar/netty_unix_buffer.c
*/opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
jar/io/netty/channel/unix/PreferredDirectByteBufAllocator.java
*/opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
jar/io/netty/channel/unix/Buffer.java
*/opt/cola/permits/1290493558_1647560271.25/0/netty-transport-native-unix-common-4-1-73-final-sources-
jar/netty_unix_buffer.h
```

# 1.162 netty-transport-native-unix-common

## 4.1.76.Final

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/UnixChannelOption.java

\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/Unix.java

\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/package-info.java

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_jni.h

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/GenericUnixChannelOption.java

\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/RawUnixChannelOption.java

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_buffer.c

\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_buffer.h

\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/PreferredDirectByteBufferAllocator.java

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainDatagramChannel.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainDatagramChannelConfig.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/SegmentedDatagramPacket.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainDatagramPacket.java

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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainSocketAddress.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/Socket.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainSocketReadMode.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/Errors.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainSocketChannelConfig.java  
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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/UnixChannel.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_errors.c  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DatagramSocketAddress.java  
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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_socket.h  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/netty\_unix\_errors.h  
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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/DomainSocketChannel.java  
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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/ErrorsStaticallyReferencedJniMethods.java  
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\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-2-jar/io/netty/channel/unix/SocketWritableByteChannel.java  
\* /opt/cola/permits/1340031451\_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-

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2-jar/io/netty/channel/unix/PeerCredentials.java
* /opt/cola/permits/1340031451_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-
2-jar/netty_unix_limits.h
* /opt/cola/permits/1340031451_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-
2-jar/netty_unix_util.c
* /opt/cola/permits/1340031451_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-
2-jar/io/netty/channel/unix/LimitsStaticallyReferencedJniMethods.java
* /opt/cola/permits/1340031451_1654618462.9426582/0/netty-transport-native-unix-common-4-1-76-final-sources-
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jar/com/couchbase/client/java/search/queries/Coordinate.java
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jar/com/couchbase/client/java/query/dsl/path/index/DefaultOnPath.java  
\* /opt/cola/permits/1341639974\_1654810046.229619/0/java-client-2-7-18-sources-  
jar/com/couchbase/client/java/document/JsonLongDocument.java  
\* /opt/cola/permits/1341639974\_1654810046.229619/0/java-client-2-7-18-sources-  
jar/com/couchbase/client/java/search/queries/MatchPhraseQuery.java  
\* /opt/cola/permits/1341639974\_1654810046.229619/0/java-client-2-7-18-sources-  
jar/com/couchbase/client/java/auth/Credential.java  
\* /opt/cola/permits/1341639974\_1654810046.229619/0/java-client-2-7-18-sources-  
jar/com/couchbase/client/java/query/dsl/path/DefaultMergeInsertPath.java  
\* /opt/cola/permits/1341639974\_1654810046.229619/0/java-client-2-7-18-sources-  
jar/com/couchbase/client/java/query/dsl/path/DefaultMergeUpdateUnsetPath.java  
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\* /opt/cola/permits/1340031775\_1654680102.675777/0/osgi-resource-locator-1-0-3-sources-2-jar/org/glassfish/hk2/osgiresourcelocator/ServiceLoader.java  
\* /opt/cola/permits/1340031775\_1654680102.675777/0/osgi-resource-locator-1-0-3-sources-2-jar/org/glassfish/hk2/osgiresourcelocator/ResourceFinder.java  
\* /opt/cola/permits/1340031775\_1654680102.675777/0/osgi-resource-locator-1-0-3-sources-2-jar/org/glassfish/hk2/osgiresourcelocator/Activator.java  
\* /opt/cola/permits/1340031775\_1654680102.675777/0/osgi-resource-locator-1-0-3-sources-2-jar/org/glassfish/hk2/osgiresourcelocator/ServiceLoaderImpl.java  
\* /opt/cola/permits/1340031775\_1654680102.675777/0/osgi-resource-locator-1-0-3-sources-2-jar/org/glassfish/hk2/osgiresourcelocator/ResourceFinderImpl.java

## 1.167 apache-commons-pool 2.4.3

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## 1.168 metrics-integration-for-jdbi3 4.1.29

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Manifest-Version: 1.0

Automatic-Module-Name: com.codahale.metrics.jersey2

Build-Jdk-Spec: 1.8

Bundle-Description: A set of class providing Metrics integration for Jersey, the reference JAX-RS implementation.

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Bundle-ManifestVersion: 2

Bundle-Name: Metrics Integration for Jersey 2.x

Bundle-SymbolicName: io.dropwizard.metrics.jersey2

Bundle-Version: 4.1.29

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.jersey2;uses:="com.codahale.metrics,javax.ws.rs.core,javax.ws.rs.ext,org.glassfish.jersey.server.model,org.glassfish.jersey.server.monitoring";version="4.1.29"

Implementation-Title: Metrics Integration for Jersey 2.x

Implementation-Version: 4.1.29

Import-Package: com.codahale.metrics;version="[4.1,5)",com.codahale.metrics.annotation;version="[4.1,5)",javax.ws.rs.core;version="[2.1,3)",javax.ws.rs.ext;version="[2.1,3)",org.glassfish.jersey.server;version="[2.35,3)",org.glassfish.jersey.server.model;version="[2.35,3)",org.glassfish.jersey.server.monitoring;version="[2.35,3)"

Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473592293\_1668798067.8552423/0/metrics-jersey2-4-1-29-jar/META-INF/MANIFEST.MF

# 1.169 curator-testing 4.2.0

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\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/QueryMap.java

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\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/codecs/ErrorDecoder.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Contract.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/codecs/EncodingException.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Request.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/RequestInterceptor.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/auth/Base64.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Util.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/RequestTemplate.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Client.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/codecs/StringDecoder.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/codecs/DecodeException.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/FeignException.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Target.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/auth/BasicAuthRequestInterceptor.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/RetryableException.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Logger.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/ReflectiveFeign.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Retryer.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/Feign.java  
\* /opt/cola/permits/1274700542\_1645235077.45/0/feign-core-8-18-0-sources-jar/feign/MethodMetadata.java

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# 1.171 io-grpc-grpc-context 1.39.0

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# 1.172 testcontainers-bom 1.16.2

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neo4j:3.5.0-enterprise

a

b

mcr.microsoft.com/mssql/server:2017-CU12

## 1.173 apache-commons-cli 1.4

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Found in path(s):

```
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/jmx/ConfigMBean.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/ConfigurationBackedDynamicPropertySupportImpl.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/ConfigurationManager.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/DynamicStringProperty.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/DynamicBooleanProperty.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/FixedDelayPollingScheduler.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/jmx/ConfigJMXManager.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/util/ConfigurationUtils.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/PollListener.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/DynamicIntProperty.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
jar/com/netflix/config/PropertyListener.java
* /opt/cola/permits/1473577639_1668493634.8446913/0/archaius-core-0-4-1-sources-2-
```

jar/com/netflix/config/ConfigurationBasedDeploymentContext.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/DynamicFloatProperty.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/AbstractDynamicPropertyListener.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/samples/SampleApplication.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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jar/com/netflix/config/ConfigurationWithPollingSource.java  
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\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/DynamicDoubleProperty.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/DynamicPropertyFactory.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/ClasspathPropertiesConfiguration.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/DynamicURLConfiguration.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/ExpandedConfigurationListenerAdapter.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/WebApplicationProperties.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/AggregatedConfiguration.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-

jar/com/netflix/config/MissingConfigurationSourceException.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
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jar/com/netflix/config/DynamicPropertySupport.java  
\* /opt/cola/permits/1473577639\_1668493634.8446913/0/archaius-core-0-4-1-sources-2-  
jar/com/netflix/config/PolledConfigurationSource.java

# 1.175 protocol-buffers-[bom] 3.17.2

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Documentation:

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Maven packaging:

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Patch contributors:

Kevin Ko <kevin.s.ko@gmail.com>

\* Small patch to handle trailing slashes in --proto\_path flag.

Johan Euphrosine <proppy@aminche.com>

\* Small patch to fix Python CallMethod().

Ulrich Kunitz <kune@deine-taler.de>

\* Small optimizations to Python serialization.

Leandro Lucarella <llucax@gmail.com>

\* VI syntax highlighting tweaks.

\* Fix compiler to not make output executable.

Dilip Joseph <dilip.antony.joseph@gmail.com>

\* Heuristic detection of sub-messages when printing unknown fields in text format.

Brian Atkinson <nairb774@gmail.com>

\* Added @Override annotation to generated Java code where appropriate.

Vincent Choinire <Choiniere.Vincent@hydro.qc.ca>

\* Tru64 support.

Monty Taylor <monty.taylor@gmail.com>

\* Solaris 10 + Sun Studio fixes.

Alek Storm <alek.storm@gmail.com>

\* Slicing support for repeated scalar fields for the Python API.

Oleg Smolsky <oleg.smolsky@gmail.com>

\* MS Visual Studio error format option.

\* Detect unordered\_map in stl\_hash.m4.

Brian Olson <brianolson@google.com>

\* gzip/zlib I/O support.

Michael Poole <mdpoole@troilus.org>

\* Fixed warnings about generated constructors not explicitly initializing all fields (only present with certain compiler settings).

\* Added generation of field number constants.

Wink Saville <wink@google.com>

\* Fixed initialization ordering problem in logging code.

Will Pierce <willp@nuclei.com>

\* Small patch improving performance of in Python serialization.  
Alexandre Vassalotti <alexandre@peadrop.com>  
\* Emacs mode for Protocol Buffers (editors/protobuf-mode.el).  
Scott Stafford <scott.stafford@gmail.com>  
\* Added Swap(), SwapElements(), and RemoveLast() to Reflection interface.  
Alexander Melnikov <alm@sibmail.ru>  
\* HPUX support.  
Oliver Jowett <oliver.jowett@gmail.com>  
\* Detect whether zlib is new enough in configure script.  
\* Fixes for Solaris 10 32/64-bit confusion.  
Evan Jones <evanj@mit.edu>  
\* Optimize Java serialization code when writing a small message to a stream.  
\* Optimize Java serialization of strings so that UTF-8 encoding happens only once per string per serialization call.  
\* Clean up some Java warnings.  
\* Fix bug with permanent callbacks that delete themselves when run.  
Michael Kucharski <m.kucharski@gmail.com>  
\* Added CodedInputStream.getTotalBytesRead().  
Kacper Kowalik <xarthisius.kk@gmail.com>  
\* Fixed m4/acx\_pthread.m4 problem for some Linux distributions.  
William Orr <will@worrbase.com>  
\* Fixed detection of sched\_yield on Solaris.  
\* Added atomicops for Solaris  
Andrew Paprocki <andrew@ishiboo.com>  
\* Fixed minor IBM xLC compiler build issues  
\* Added atomicops for AIX (POWER)

# 1.176 jetty-java-based-http-1-x-http-2-servlet-websocket-server 9.4.45.v20220203

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\* org.eclipse.jetty.orbit:org.eclipse.jdt.core

The following artifacts are EPL and ASL2.

\* org.eclipse.jetty.orbit:javax.security.auth.message

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\* org.eclipse.jetty.orbit:javax.mail.glassfish

-----

Oracle

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<https://glassfish.dev.java.net/nonav/public/CDDL+GPL.html>

- \* javax.servlet:javax.servlet-api
- \* javax.annotation:javax.annotation-api
- \* javax.transaction:javax.transaction-api
- \* javax.websocket:javax.websocket-api

-----

Oracle OpenJDK

If ALPN is used to negotiate HTTP/2 connections, then the following artifacts may be included in the distribution or downloaded when ALPN module is selected.

- \* java.sun.security.ssl

These artifacts replace/modify OpenJDK classes. The modifications are hosted at github and both modified and original are under GPL v2 with classpath exceptions.

<http://openjdk.java.net/legal/gplv2+ce.html>

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OW2

The following artifacts are licensed by the OW2 Foundation according to the terms of <http://asm.ow2.org/license.html>

org.ow2.asm:asm-commons  
org.ow2.asm:asm

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Apache

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org.apache.taglibs:taglibs-standard-spec  
org.apache.taglibs:taglibs-standard-impl

-----

MortBay

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org.mortbay.jasper:apache-jsp  
org.apache.tomcat:tomcat-jasper  
org.apache.tomcat:tomcat-juli  
org.apache.tomcat:tomcat-jsp-api  
org.apache.tomcat:tomcat-el-api  
org.apache.tomcat:tomcat-jasper-el  
org.apache.tomcat:tomcat-api  
org.apache.tomcat:tomcat-util-scan  
org.apache.tomcat:tomcat-util

org.mortbay.jasper:apache-el  
org.apache.tomcat:tomcat-jasper-el  
org.apache.tomcat:tomcat-el-api

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Mortbay

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<https://glassfish.dev.java.net/nonav/public/CDDL+GPL.html>

org.eclipse.jetty.toolchain:jetty-schemas

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Assorted

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## 1.178 jackson-core 2.13.3

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## 1.179 jcl-1-2-implemented-over-slf4j 1.7.32

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\* /opt/cola/permits/1300428401\_1649931151.46/0/jcl-over-slf4j-1-7-32-jar/META-INF/maven/org.slf4j/jcl-over-slf4j/pom.xml

## 1.180 fabric8-:::kubernetes-model-:::core

### 4.10.3

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\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/annotation/AutoPopulated.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/annotation/repeatable/WhereSpecifications.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/annotation/event/PreUpdate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/model/package-info.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/intercept/reactive/SaveAllReactiveInterceptor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/model/query/QueryParameter.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/model/runtime/BatchOperation.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/repository/GenericRepository.java

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\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/model/jpa/criteria/IExpression.java

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\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-jar/io/micronaut/data/model/jpa/criteria/impl/QueryResultPersistentEntityCriteriaQuery.java

\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-

jar/io/micronaut/data/operations/reactive/BlockingReactorRepositoryOperations.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/DisjunctionPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/kotlin/CoroutineCrudRepository.kt  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/AbstractPersistentEntityCriteriaQuery.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/SelectionVisitor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/selection/AggregateExpression.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityCriteriaQuery.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/ParameterExpressionImpl.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/AbstractCriteriaBuilder.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/util/Joiner.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/selection/CompoundSelection.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/runtime/convert/AttributeConverter.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityCriteriaBuilder.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/CriteriaUtils.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityPath.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/IPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PersistentPropertyInValuesPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityFrom.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityCriteriaUpdate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/runtime/AttributeConverterRegistry.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/QueryEventContext.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/AbstractPersistentEntityCriteriaUpdate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/PersistentPropertyPath.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PostUpdateEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-

jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PersistentPropertyUnaryPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/operations/reactive/ReactorReactiveRepositoryOperations.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityJoin.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/criteria/DeleteSpecification.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PostPersistEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/criteria/PredicateSpecification.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/reactive/ReactorJpaSpecificationExecutor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/IdExpression.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/annotation/Indexes.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PersistentPropertyInPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/PersistentAssociationPath.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/annotation/Index.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/selection/AbstractPersistentPropertyExpression.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/runtime/PropertyAutoPopulator.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/PersistentPropertyOrder.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PersistentPropertyBetweenPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PreRemoveEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PersistentPropertyBinaryPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/runtime/RuntimeEntityRegistry.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityRoot.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/query/BindingContextImpl.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/async/AsyncJpaSpecificationExecutor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/query/BindingParameter.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PredicateBinaryOp.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-

jar/io/micronaut/data/model/jpa/criteria/impl/AbstractPersistentPropertyPath.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/ISelection.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/PredicateVisitable.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/criteria/QuerySpecification.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/query/QueryModelSelectionVisitor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/LiteralExpression.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/criteria/UpdateSpecification.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/AbstractPersistentEntityCriteriaDelete.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/AbstractPersistentEntityJoinSupport.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/ConjunctionPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/EntityEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/operations/reactive/ReactorReactiveCapableRepository.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/PersistenceEventException.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/runtime/QueryParameterBinding.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PostRemoveEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/ExpressionBinaryPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/selection/AliasedSelection.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/selection/AbstractNumericalPersistentPropertyExpression.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/QueryModelPersistentEntityCriteriaQuery.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/PredicateUnaryOp.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/query/builder/QueryParameterBinding.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PrePersistEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/SelectionVisitable.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/jpa/reactive/ReactiveStreamsJpaSpecificationExecutor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-

jar/io/micronaut/data/model/jpa/criteria/impl/selection/AggregateType.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/AbstractPersistentPropertyPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/PredicateVisitor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/PersistenceEventContext.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentEntityCriteriaDelete.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/event/listeners/PreUpdateEventListener.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/repository/reactive/ReactorCrudRepository.java  
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jar/io/micronaut/data/model/jpa/criteria/impl/query/QueryModelPredicateVisitor.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/NegatedPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/impl/predicate/AbstractPredicate.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentAssociationPath.java  
\* /opt/cola/permits/1331474323\_1653513905.8667567/0/micronaut-data-model-3-3-0-sources-  
jar/io/micronaut/data/model/jpa/criteria/PersistentPropertyPath.java

# 1.182 servicelocator-default-implementation

## 2.6.1

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jar/io/micronaut/mqtt/annotation/Retained.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
jar/io/micronaut/mqtt/bind/AnnotatedMqttBinder.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
jar/io/micronaut/mqtt/bind/DefaultMqttBinderRegistry.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
jar/io/micronaut/mqtt/serdes/MqttPayloadSerDesRegistry.java  
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jar/io/micronaut/mqtt/bind/MqttBinderRegistry.java  
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jar/io/micronaut/mqtt/bind/impl/QosMqttBinder.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
jar/io/micronaut/mqtt/serdes/MqttPayloadSerDes.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
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jar/io/micronaut/mqtt/config/MqttSSLConfiguration.java  
* /opt/cola/permits/1331473884_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-  
jar/io/micronaut/mqtt/exception/MqttSubscriberException.java  
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jar/io/micronaut/mqtt/bind/impl/RetainedMqttBinder.java
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\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/intercept/AbstractMqttIntroductionAdvice.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/annotation/Topics.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/bind/impl/AcknowledgeMqttBinder.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/intercept/AbstractMqttSubscriberAdvice.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/bind/impl/DefaultMqttBinder.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/exception/MqttSubscriberExceptionHandler.java

\* /opt/cola/permits/1331473884\_1653514363.4906576/0/micronaut-mqtt-core-2-1-0-sources-jar/io/micronaut/mqtt/bind/MqttBindingContext.java

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```
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jar/io/micronaut/mqtt/annotation/Topic.java
```

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## 4.1.4

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```
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-jar/com/google/j2objc/annotations/RetainedWith.java  
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-jar/com/google/j2objc/annotations/Property.java
```

```
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/LoopTranslation.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/ObjectiveCName.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/ReflectionSupport.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/RetainedLocalRef.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
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* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/Weak.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/AutoreleasePool.java
* /opt/cola/permits/1131003150_1612875443.99/0/j2objc-annotations-1-3-sources-3-
jar/com/google/j2objc/annotations/WeakOuter.java
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# 1.188 micronaut-micrometer 4.2.1

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- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/cache/package-info.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/netty/InstrumentedKQueueEventLoopGroupFactory.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/annotation/package-info.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/executor/package-info.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/netty/ByteBufAllocatorMetricsBinder.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/web/ClientRequestMetricRegistryFilter.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/aggregator/package-info.java
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- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/management/endpoint/MetricsEndpoint.java
- \* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/micrometer/MeterRegistryFactory.java
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\* /opt/cola/permits/1331474018\_1653514625.490619/0/micronaut-micrometer-core-4-2-1-sources-jar/io/micronaut/configuration/metrics/binder/cache/JCacheMetricsBinder.java  
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```

Found in path(s):

\* /opt/cola/permits/1473592355\_1668494763.3144631/0/akka-http-core-2-11-10-1-12-sources-jar/akka/http/impl/model/parser/Base64Parsing.scala

\* /opt/cola/permits/1473592355\_1668494763.3144631/0/akka-http-core-2-11-10-1-12-sources-jar/akka/http/impl/model/parser/StringBuilding.scala

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// Public domain algorithm: <http://graphics.stanford.edu/~seander/bithacks.html#RoundUpPowerOf2>.

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\* /opt/cola/permits/1473592355\_1668494763.3144631/0/akka-http-core-2-11-10-1-12-sources-jar/akka/http/scaladsl/model/sse/ServerSentEvent.scala

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/\*\*

\* A Utf8 -> Utf16 (= Java char) decoder.

\*

\* This decoder is based on the one of Bjoern Hoehrmann from

\*

\* <http://bjoern.hoehrmann.de/utf-8/decoder/dfa/>

\*

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\* INTERNAL API

\*/

Found in path(s):

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```
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```

```
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Ty Coon, President of Vice
```

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# 1.192 bucket4j-core 4.4.1

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 */
```

Found in path(s):

```
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/Bucket.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/EstimationProbe.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/BucketListener.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/ReplaceConfigurationOrReturnPreviousCommand.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/BucketExceptions.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/Bandwidth.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/Extension.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/local/LockFreeBucket.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/ConfigurationBuilder.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/SimpleBucketListener.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/BlockingStrategy.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
```

jar/io/github/bucket4j/local/LocalBucketBuilder.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/GetAvailableTokensCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/local/LocalBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/GridBucketState.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/RecoveryStrategy.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/Refill.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/CreateSnapshotCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/BlockingBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/GridCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/TryConsumeAndReturnRemainingTokensCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/local/FakeLock.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/IncompatibleConfigurationException.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/Nothing.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/AsyncBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/TryConsumeCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/GridBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/local/SynchronizedBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/CommandResult.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/AbstractBucket.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/TimeMeter.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/grid/ConsumeAsMuchAsPossibleCommand.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/BucketState.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/Bucket4j.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-  
jar/io/github/bucket4j/BucketConfiguration.java  
\* /opt/cola/permits/1473592299\_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-

```
jar/io/github/bucket4j/grid/ProxyManager.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/GridProxy.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/BucketNotFoundException.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/local/SynchronizationStrategy.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/AbstractBucketBuilder.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/UninterruptibleBlockingStrategy.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/AddTokensCommand.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/ReserveAndCalculateTimeToSleepCommand.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/AsyncScheduledBucket.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/ConsumptionProbe.java
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-
jar/io/github/bucket4j/grid/EstimateAbilityToConsumeCommand.java
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```
Found in path(s):
* /opt/cola/permits/1473592299_1668494641.8532739/0/bucket4j-core-4-4-1-sources-1-jar/META-
INF/maven/com.github.vladimir-bukhtoyarov/bucket4j-core/pom.xml
```

## 1.193 software-amazon-ion-ion-java 1.0.2

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Amazon Ion Java

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# 1.194 s3mock 0.2.6

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## 1.195 jdbi-guava-integration 3.25.0

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Found in path(s):

```
* /opt/cola/permits/1473592257_1668797404.023364/0/jdbi3-guava-3-25-0-jar/META-INF/maven/org.jdbi/jdbi3-guava/pom.xml
```

## 1.196 micronaut-oracle-cloud 2.1.1

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\* /opt/cola/permits/1331474080\_1653514413.2292626/0/micronaut-oraclecloud-sdk-2-1-1-sources-jar/io/micronaut/oraclecloud/clients/SdkClients.java  
\* /opt/cola/permits/1331474080\_1653514413.2292626/0/micronaut-oraclecloud-sdk-2-1-1-sources-jar/io/micronaut/oraclecloud/clients/SdkAutomaticFeature.java  
\* /opt/cola/permits/1331474080\_1653514413.2292626/0/micronaut-oraclecloud-sdk-2-1-1-sources-jar/io/micronaut/oraclecloud/clients/BouncyCastleFeature.java

## 1.197 protocol-buffer-java-util-package 3.19.4

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Found in path(s):

\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/compiler/plugin.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/struct.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/wrappers.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/type.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/api.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/timestamp.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/any.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/field\_mask.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/duration.proto

\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/empty.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/source\_context.proto  
\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/google/protobuf/descriptor.proto  
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Manifest-Version: 1.0  
Automatic-Module-Name: com.google.protobuf  
Bnd-LastModified: 1643389670477  
Build-Jdk: 1.8.0\_181-google-v7  
Built-By: acozzette  
Bundle-Description: Core Protocol Buffers library. Protocol Buffers are a way of encoding structured data in an efficient yet extensible format.  
Bundle-DocURL: <https://developers.google.com/protocol-buffers/>  
Bundle-License: <https://opensource.org/licenses/BSD-3-Clause>  
Bundle-ManifestVersion: 2  
Bundle-Name: Protocol Buffers [Core]  
Bundle-SymbolicName: com.google.protobuf  
Bundle-Version: 3.19.4  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.google.protobuf;version="3.19.4"  
Import-Package: sun.misc;resolution:=optional,com.google.protobuf;version="[3.19,4)"  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.7))"  
Tool: Bnd-3.0.0.201509101326

Found in path(s):

\* /opt/cola/permits/1337069927\_1654204168.4612696/0/protobuf-java-3-19-4-1-jar/META-INF/MANIFEST.MF

## 1.198 akka-actor 2.5.31

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No license file was found, but licenses were detected in source scan.

/\*  
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\*/

Found in path(s):

\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/ForkJoinTask.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/ThreadLocalRandom.java

\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/package-info.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/LinkedTransferQueue.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/TransferQueue.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/RecursiveTask.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/ForkJoinWorkerThread.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/ForkJoinPool.java  
\* /opt/cola/permits/1473591981\_1668494826.3828034/0/akka-actor-2-11-2-5-31-sources-1-jar/akka/dispatch/forkjoin/RecursiveAction.java

# 1.199 fabric8-::-openshift-model 4.10.3

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# 1.200 junit-platform-junit-platform-engine

## 1.8.2

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## 1.202 caffeine-cache 2.9.1

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JSR-250 Common Annotations for the Java™ Platform  
(<http://jcp.org/aboutJava/communityprocess/final/jsr250/index.html>) javax.annotation:jsr250-api:jar:1.0  
License: COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL) Version 1.0  
<https://glassfish.java.net/public/CDDLv1.0.html> (lib/jsr250-api.license)

CDI APIs (<http://www.seamframework.org/Weld/cdi-api>) javax.enterprise:cdi-api:jar:1.0  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0> (lib/cdi-api.license)

Maven Aether Provider (<http://maven.apache.org/ref/3.2.5/maven-aether-provider>) org.apache.maven:maven-aether-  
provider:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-aether-  
provider.license)

Maven Artifact (<http://maven.apache.org/ref/3.2.5/maven-artifact>) org.apache.maven:maven-artifact:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-  
artifact.license)

Maven Compat (<http://maven.apache.org/ref/3.2.5/maven-compat>) org.apache.maven:maven-compat:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-  
compat.license)

Maven Core (<http://maven.apache.org/ref/3.2.5/maven-core>) org.apache.maven:maven-core:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-core.license)

Maven Embedder (<http://maven.apache.org/ref/3.2.5/maven-embedder>) org.apache.maven:maven-  
embedder:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-

embedder.license)

Maven Model (<http://maven.apache.org/ref/3.2.5/maven-model>) org.apache.maven:maven-model:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-model.license)

Maven Model Builder (<http://maven.apache.org/ref/3.2.5/maven-model-builder>) org.apache.maven:maven-model-builder:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-model-builder.license)

Maven Plugin API (<http://maven.apache.org/ref/3.2.5/maven-plugin-api>) org.apache.maven:maven-plugin-api:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-plugin-api.license)

Maven Repository Metadata Model (<http://maven.apache.org/ref/3.2.5/maven-repository-metadata>) org.apache.maven:maven-repository-metadata:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-repository-metadata.license)

Maven Settings (<http://maven.apache.org/ref/3.2.5/maven-settings>) org.apache.maven:maven-settings:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-settings.license)

Maven Settings Builder (<http://maven.apache.org/ref/3.2.5/maven-settings-builder>) org.apache.maven:maven-settings-builder:jar:3.2.5  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/maven-settings-builder.license)

Apache Maven Wagon :: Providers :: File Provider (<http://maven.apache.org/wagon/wagon-providers/wagon-file>) org.apache.maven.wagon:wagon-file:jar:2.8  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/wagon-file.license)

Apache Maven Wagon :: Providers :: HTTP Provider (<http://maven.apache.org/wagon/wagon-providers/wagon-http>) org.apache.maven.wagon:wagon-http:jar:2.8  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/wagon-http.license)

Apache Maven Wagon :: Providers :: HTTP Shared Library (<http://maven.apache.org/wagon/wagon-providers/wagon-http-shared>) org.apache.maven.wagon:wagon-http-shared:jar:2.8  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/wagon-http-shared.license)

Apache Maven Wagon :: API (<http://maven.apache.org/wagon/wagon-provider-api>) org.apache.maven.wagon:wagon-provider-api:jar:2.8  
License: Apache License, Version 2.0 <http://www.apache.org/licenses/LICENSE-2.0.txt> (lib/wagon-provider-api.license)

Aether API (<http://www.eclipse.org/aether/aether-api/>) org.eclipse.aether:aether-api:jar:1.0.0.v20140518  
License: Eclipse Public License, Version 1.0 <http://www.eclipse.org/legal/epl-v10.html> (lib/aether-api.license)

Aether Connector Basic (<http://www.eclipse.org/aether/aether-connector-basic/>) org.eclipse.aether:aether-connector-basic:jar:1.0.0.v20140518  
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Aether Implementation (<http://www.eclipse.org/aether/aether-impl/>) org.eclipse.aether:aether-impl:jar:1.0.0.v20140518  
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Aether SPI (<http://www.eclipse.org/aether/aether-spi/>) org.eclipse.aether:aether-spi:jar:1.0.0.v20140518  
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Aether Transport Wagon (<http://www.eclipse.org/aether/aether-transport-wagon/>) org.eclipse.aether:aether-transport-wagon:jar:1.0.0.v20140518  
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Aether Utilities (<http://www.eclipse.org/aether/aether-util/>) org.eclipse.aether:aether-util:jar:1.0.0.v20140518  
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org.eclipse.sisu.inject (<http://www.eclipse.org/sisu/org.eclipse.sisu.inject/>)  
org.eclipse.sisu:org.eclipse.sisu.inject:eclipse-plugin:0.3.0.M1  
License: Eclipse Public License, Version 1.0 <http://www.eclipse.org/legal/epl-v10.html>  
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org.eclipse.sisu.plexus (<http://www.eclipse.org/sisu/org.eclipse.sisu.plexus/>)  
org.eclipse.sisu:org.eclipse.sisu.plexus:eclipse-plugin:0.3.0.M1  
License: Eclipse Public License, Version 1.0 <http://www.eclipse.org/legal/epl-v10.html>  
(lib/org.eclipse.sisu.plexus.license)

jsoup (<http://jsoup.org/>) org.jsoup:jsoup:jar:1.7.2  
License: The MIT License <http://jsoup.com/license> (lib/jsoup.license)

SLF4J API Module (<http://www.slf4j.org>) org.slf4j:slf4j-api:jar:1.7.5  
License: MIT License <http://www.opensource.org/licenses/mit-license.php> (lib/slf4j-api.license)

SLF4J Simple Binding (<http://www.slf4j.org>) org.slf4j:slf4j-simple:jar:1.7.5  
License: MIT License <http://www.opensource.org/licenses/mit-license.php> (lib/slf4j-simple.license)

Plexus Cipher: encryption/decryption Component (<http://spice.sonatype.org/plexus-cipher>)  
org.sonatype.plexus:plexus-cipher:jar:1.7  
License: Apache Public License 2.0 <http://www.apache.org/licenses/LICENSE-2.0> (lib/plexus-cipher.license)

Plexus Security Dispatcher Component (<http://spice.sonatype.org/plexus-sec-dispatcher>)  
org.sonatype.plexus:plexus-sec-dispatcher:jar:1.3

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```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN"
"http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" version="XHTML+RDFa 1.0" dir="ltr">

<head profile="http://www.w3.org/1999/xhtml/vocab">
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
  <link rel="shortcut icon" href="http://opensource.org/files/garland_favicon.png" type="image/png" />
  <link rel="shortlink" href="/node/66" />
  <link rel="canonical" href="/licenses/MIT" />
  <meta name="Generator" content="Drupal 7 (http://drupal.org)" />
  <title>The MIT License (MIT) | Open Source Initiative</title>
  <link type="text/css" rel="stylesheet" href="http://opensource.org/files/css/css_xE-rWrJf-
fncB6ztZfd2huxqgxu4WO-qwma6Xer30m4.css" media="all" />
  <link type="text/css" rel="stylesheet" href="http://opensource.org/files/css/css_2ATB4XKGEvmoUk_p62PwI-
o2aW47EqqS0nD2dmPZoV4.css" media="all" />
  <link type="text/css" rel="stylesheet" href="http://opensource.org/files/css/css_2wI77kyP-
rJKVpFW5M3KFcj7Cb99lZalmubKIwWwsmU.css" media="all" />
  <link type="text/css" rel="stylesheet"
href="http://opensource.org/files/css/css_k3snrbsthqot7V7ccRZHS9OkCZkwBv4adtNieIVlbeU.css" media="print"
/>

  <!--[if lt IE 7]>
  <link type="text/css" rel="stylesheet" href="http://opensource.org/themes/garland/fix-ie.css?fnb7pm" media="all"
  />
  <![endif]-->
  <script type="text/javascript"
src="http://opensource.org/files/js/js_xAPI0qIk9eowy_is9tNkCWXLUVoat94SQT48UBCFkyQ.js"></script>
  <script type="text/javascript">
  <!--/--><![CDATA[//><!--
jQuery.extend(Drupal.settings,
  {"basePath":"\/","pathPrefix":"","ajaxPageState":{"theme":"garland","theme_token":"meUjjBBfr6QFJv5kp0oKi152
l673C3xJMLGIQzbH9g0"},"js":{"misc\/jquery.js":1,"misc\/jquery.once.js":1,"misc\/drupal.js":1},"css":{"modules\/s
ystem\/system.base.css":1,"modules\/system\/system.menus.css":1,"modules\/system\/system.messages.css":1,"mod
ules\/system\/system.theme.css":1,"modules\/aggregator\/aggregator.css":1,"modules\/comment\/comment.css":1,"m
odules\/field\/theme\/field.css":1,"sites\/all\/modules\/mollom\/mollom.css":1,"modules\/node\/node.css":1,"modules
\/search\/search.css":1,"modules\/user\/user.css":1,"themes\/garland\/style.css":1,"themes\/garland\/print.css":1,"the
mes\/garland\/fix-ie.css":1}}});
  /--><![]]>
</script>
</head>
<body class="html not-front not-logged-in one-sidebar sidebar-first page-node page-node- page-node-66 node-type-
page fluid-width" >
  <div id="skip-link">
    <a href="#main-content" class="element-invisible element-focusable">Skip to main content</a>
  </div>
```

```

<div id="wrapper">
  <div id="container" class="clearfix">

    <div id="header">
      <div id="logo-floater">
        <div id="branding"><strong><a href="/">
          
          <span>Open Source Initiative</span>      </a></strong></div>
        </div>

      </div> <!-- /#header -->

      <div id="sidebar-first" class="sidebar">
        <div class="region region-sidebar-first">
          <div id="block-search-form" class="block block-search clearfix">

            <h2 class="title">Search this site:</h2>

            <div class="content">
              <form action="/licenses/mit-license.php" method="post" id="search-block-form" accept-charset="UTF-
8"><div><div class="container-inline">
                <div class="form-item form-type-textfield form-item-search-block-form">
                  <label class="element-invisible" for="edit-search-block-form--2">Search </label>
                  <input title="Enter the terms you wish to search for." type="text" id="edit-search-block-form--2"
name="search_block_form" value="" size="15" maxlength="128" class="form-text" />
                </div>
                <div class="form-actions form-wrapper" id="edit-actions"><input type="submit" id="edit-submit" name="op"
value="Search" class="form-submit" /></div><input type="hidden" name="form_build_id" value="form-
MyBqFtDvdzOmaSnCHKIG9yhm0ofMr7fNMG5Vy76N_uk" />
                <input type="hidden" name="form_id" value="search_block_form" />
              </div>
            </div></form> </div>
          </div>
          <div id="block-system-navigation" class="block block-system block-menu clearfix">

            <h2 class="title">Navigation</h2>

            <div class="content">
              <ul class="menu"><li class="first collapsed"><a href="/about" title="About the Open Source Initiative">About
the OSI</a></li>
                <li class="collapsed"><a href="/osd" title="The actual OSD defining what constitutes an Open Source licence">The
Open Source Definition</a></li>
                <li class="collapsed"><a href="/licenses">Open Source Licenses</a></li>
                <li class="leaf"><a href="/working_groups">Working Groups</a></li>
                <li class="leaf"><a href="/faq" title="Frequently Asked Questions about open source and about the
OSI.">FAQ</a></li>
                <li class="collapsed"><a href="/trademark" title="Information about trademark and logo usage">Trademark and

```

```

Logo Usage</a></li>
<li class="collapsed"><a href="/osr-intro" title="Open Standards Requirement for Software">Open
Standards</a></li>
<li class="leaf"><a href="/osi-open-source-education" title="OSI&#039;s Open Source Education Initiative and
Activities">Open Source Education</a></li>
<li class="collapsed"><a href="/lists" title="The virtual committees where the OSI&#039;s work gets
done">Mailing lists</a></li>
<li class="collapsed"><a href="/help" title="Resources for questions and further exploration">Getting
Help</a></li>
<li class="collapsed"><a href="http://opensource.org/donate" title="">Donate to the OSI</a></li>
<li class="leaf"><a href="/members">OSI Individual Membership</a></li>
<li class="leaf"><a href="/store">OSI Store</a></li>
<li class="collapsed"><a href="/affiliates" title="Home page for OSI&#039;s membership scheme for non-profits
and not-for-profits">OSI Affiliate Membership</a></li>
<li class="leaf"><a href="/contact" title="">Contact OSI</a></li>
<li class="leaf"><a href="/ToS" title="Rules for posting content on this site">Terms of Service</a></li>
<li class="last leaf"><a href="/support">OSI Corporate Support</a></li>
</ul> </div>
</div>
</div>
</div>

```

```

<div id="center"><div id="squeeze"><div class="right-corner"><div class="left-corner">
<h2 class="element-invisible">You are here</h2><div class="breadcrumb"><a href="/">Home</a></div>
<a id="main-content"></a>
<div id="tabs-wrapper" class="clearfix">
<h1 class="with-tabs">The MIT License
(MIT)</h1>
</div>
<div class="clearfix">
<div class="region region-content">
<div id="block-system-main" class="block block-system clearfix">
<div class="content">
<div id="node-66" class="node node-page">

```

```

<div class="content clearfix">

<div class="field field-name-body field-type-text-with-summary field-label-hidden"><div class="field-
items"><div class="field-item even"><p>The MIT License (MIT)</p>
<p>Copyright (c) &lt;year&gt; &lt;copyright holders&gt;</p>
<p>Permission is hereby granted, free of charge, to any person obtaining a copy<br />
of this software and associated documentation files (the "Software"), to deal<br />
in the Software without restriction, including without limitation the rights<br />

```

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```
<!-- <rdf:RDF xmlns="http://web.resource.org/cc/" xmlns:dc="http://purl.org/dc/elements/1.1/"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#" xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#">
  <Work rdf:about="">
    <license rdf:resource="http://creativecommons.org/licenses/by/3.0/" />
  </Work>
  <License rdf:about="http://creativecommons.org/licenses/by/3.0/"><permits
rdf:resource="http://web.resource.org/cc/Reproduction"/><permits
rdf:resource="http://web.resource.org/cc/Distribution"/><requires
rdf:resource="http://web.resource.org/cc/Notice"/><requires
rdf:resource="http://web.resource.org/cc/Attribution"/><permits
rdf:resource="http://web.resource.org/cc/DerivativeWorks"/></License></rdf:RDF>
-->
```

| <a href=" ../ToS">Terms of Service</a>

```
</p>
</div>
</div>
<div id="block-block-7" class="block block-block clearfix">
```

```
<div class="content">
  <script src="http://www.google-analytics.com/urchin.js" type="text/javascript">
<!--/--><![CDATA[// ><!--
```

```
//--><![>
</script><script type="text/javascript">
<!--/--><![CDATA[// ><!--
```

```
_uacct = "UA-3916956-1";
urchinTracker();
```

```
//--><![>
</script> </div>
</div>
</div>
  </div></div></div></div> <!-- /.left-corner, /.right-corner, /#squeeze, /#center -->
```

```
</div> <!-- /#container -->
</div> <!-- /#wrapper -->
</body>
</html>
```

=====  
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Junit (<http://www.junit.org>)

JCIFS (<http://jcifs.samba.org>)

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```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
```

```
<html>
```

```
<head>
```

```
<meta http-equiv="content-type"
content="text/html; charset=ISO-8859-1">
```

```
<title>CDDL ver. 1.0</title>
```

```
<meta name="author" content="Cliff Allen">
```

```
</head>
```

```
<body>
```

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</body>

</html>

<!DOCTYPE html>

<html>

<head>

<title>jsoup License</title>

<meta name="keywords" content="license, open source, mit">

<meta name="description" content="jsoup is licensed under the MIT open source license">

<link type="text/css" rel="stylesheet" href="/rez/style.css">

```

<script type="text/javascript">
  var _gaq = _gaq || [];
  _gaq.push(['_setAccount', 'UA-89734-10']);
  _gaq.push(['_setDomainName', 'jsoup.org']);
  _gaq.push(['_trackPageview']);

  (function() {
    var ga = document.createElement('script'); ga.type = 'text/javascript'; ga.async = true;
    ga.src = ('https:' == document.location.protocol ? 'https://ssl' : 'http://www') + '.google-analytics.com/ga.js';
    var s = document.getElementsByTagName('script')[0]; s.parentNode.insertBefore(ga, s);
  })();
</script>
</head>
<body class="n1-">
<div class="wrap">
<div class="header">
<div class="nav-sections">
<ul>
<li class="n1-home"><h4><a href="/">jsoup</a></h4></li>
<li class="n1-news"><a href="/news/">News</a></li>
<li class="n1-bugs"><a href="/bugs">Bugs</a></li>
<li class="n1-discussion"><a href="/discussion">Discussion</a></li>
<li class="n1-download"><a href="/download">Download</a></li>
<li class="n1-api"><a href="/apidocs/">API Reference</a></li>
<li class="n1-cookbook"><a href="/cookbook/">Cookbook</a></li>
<li class="n1-try"><a href="http://try.jsoup.org/">Try jsoup</a></li>
</ul>
</div>
</div>
<div class="breadcrumb">
<a href="/">jsoup</a>
<span class="seperator">&raquo;</span> jsoup License
</div>
<div class="content">
<div class="col1">
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```
</div>
<!-- /col1 -->
<div class="col2">
</div>
<!-- /col2 -->
</div>
<!-- /content-->
<div class="footer">
<b>jsoup HTML parser</b> &copy; 2009 - 2014
<a href="http://jhy.io/" rel="author"><b>Jonathan Hedley</b></a>
</div>
</div>
<!-- /wrap -->
<script src="/rez/prettify.js"></script>
<script>prettyPrint();</script>
</body>
</html>
<?xml version="1.0" encoding="ISO-8859-1" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">

<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1" />
<title>Eclipse Public License - Version 1.0</title>
<style type="text/css">
body {
size: 8.5in 11.0in;
margin: 0.25in 0.5in 0.25in 0.5in;
tab-interval: 0.5in;
}
p {
margin-left: auto;
margin-top: 0.5em;
margin-bottom: 0.5em;
}
p.list {
margin-left: 0.5in;
margin-top: 0.05em;
margin-bottom: 0.05em;
}
</style>
```

</head>

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

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However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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Otherwise, if the work is a derivative of the Library, you may

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<one line to give the library's name and a brief idea of what it does.>  
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```

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```

```
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Lesser General Public License for more details.
```

```
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License along with this library; if not, write to the Free Software  
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
```

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You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the  
library `Frob' (a library for tweaking knobs) written by James Random Hacker.
```

```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
```

That's all there is to it!

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">  
<html lang="en">  
<head>  
  <title>Apache License, Version 2.0</title>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<meta property="og:image" content="http://www.apache.org/images/asf_logo.gif" />

<link rel="stylesheet" type="text/css" media="screen" href="/css/style.css">
<link rel="stylesheet" type="text/css" media="screen" href="/css/code.css">

<script type="text/javascript" src="/js/jquery.js"></script>
<script type="text/javascript" src="/js/apache_boot.js"></script>
```

```
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distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR
CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing
permissions and limitations under the License. -->
</head>
```

```
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    <h2>Apache License, Version 2.0</h2>
  </div>
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      <!-- <li><a href="/" title="Welcome!">Home</a></li> -->
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      <li><a href="http://projects.apache.org" title="The Projects">Projects</a></li>
      <li><a href="http://people.apache.org" title="The People">People</a></li>
      <li><a href="/foundation/getinvolved.html" title="Get Involved">Get Involved</a></li>
      <li><a href="/dyn/closer.cgi" title="Download">Download</a></li>
      <li><a href="/foundation/sponsorship.html" title="Support Apache">Support Apache</a></li>
    </ul>
    <p><a href="/">Home</a> &nbsp;&raquo;&nbsp;&nbsp;<a href="/licenses/">Licenses</a></p>
    <form name="search" id="search" action="http://www.google.com/search" method="get">
      <input value="apache.org" name="sitesearch" type="hidden">
      <input type="text" name="q" id="query">
      <input type="submit" id="submit" value="Search">
    </form>
  </div>
  <div class="clear"></div>
```

<div id="content" class="grid\_16"><div class="section-content"><p>Apache License<br></br>Version 2.0,  
January 2004<br></br>

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</ol>

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</pre></div></div></div>

<div class="clear"></div>

</div>

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<div class="links grid\_16">

<div class="grid\_3">

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<ul>

<li><a href="http://httpd.apache.org/" title="Apache Web Server (httpd)">HTTP Server</a></li>

<li><a href="http://abdera.apache.org/" title="Atom Publishing Protocol Implementation">Abdera</a></li>

<li><a href="http://accumulo.apache.org/" title="Sorted, distributed key/value store">Accumulo</a></li>

<li><a href="http://ace.apache.org/" title="Centralized life cycle management and deployment of OSGi based and related modular software artifacts for distribution.">ACE</a></li>

<li><a href="http://activemq.apache.org/" title="Distributed Messaging System">ActiveMQ</a></li>

<li><a href="http://airavata.apache.org/" title="Workflow and Computational Job Management Middleware">Airavata</a></li>

- <li><a href="http://allura.apache.org/" title="Forge software for hosting software projects">Allura</a></li>
- <li><a href="http://ambari.apache.org/" title="Hadoop cluster management">Ambari</a></li>
- <li><a href="http://ant.apache.org/" title="Java-based build tool">Ant</a></li>
- <li><a href="http://any23.apache.org/" title="Anything to Triples">Any23</a></li>
- <li><a href="http://apr.apache.org/" title="Apache Portable Runtime libraries">APR</a></li>
- <li><a href="http://archiva.apache.org/" title="Build Artifact Repository Manager">Archiva</a></li>
- <li><a href="http://aries.apache.org/" title="Enterprise OSGi application programming model">Aries</a></li>
- <li><a href="http://avro.apache.org/" title="A Serialization System">Avro</a></li>
- <li><a href="http://axis.apache.org/" title="Java SOAP Engine">Axis</a></li>
- <li><a href="http://bigtop.apache.org/" title="Apache Hadoop ecosystem integration and distribution project">Bigtop</a></li>
- <li><a href="http://bloodhound.apache.org/" title="Issue tracking, wiki and repository browser">Bloodhound</a></li>
- <li><a href="http://buildr.apache.org/" title="Simple and intuitive build system for Java applications">Buildr</a></li>
- <li><a href="http://bval.apache.org/" title="Apache BVal: JSR-303 Bean Validation Implementation and Extensions">BVal</a></li>
- <li><a href="http://camel.apache.org/" title="Spring based Integration Framework which implements the Enterprise Integration Patterns">Camel</a></li>
- <li><a href="http://cassandra.apache.org/" title="Highly scalable second-generation distributed database">Cassandra</a></li>
- <li><a href="http://cayenne.apache.org/" title="User-friendly Java ORM with Tools">Cayenne</a></li>
- <li><a href="http://chemistry.apache.org/" title="CMIS (Content Management Interoperability Services) Clients and Servers">Chemistry</a></li>
- <li><a href="http://chukwa.apache.org/" title="Open source data collection system for monitoring large distributed systems.">Chukwa</a></li>
- <li><a href="http://clerezza.apache.org/" title="Semantically linked data for OSGi">Clerezza</a></li>
- <li><a href="http://cloudstack.apache.org/" title="Infrastructure as a Service solution">CloudStack</a></li>
- <li><a href="http://cocoon.apache.org/" title="Web development framework: separation of concerns, component-based">Cocoon</a></li>
- <li><a href="http://commons.apache.org/" title="Reusable Java components">Commons</a></li>
- <li><a href="http://continuum.apache.org/" title="Continuous Integration and Build Server">Continuum</a></li>
- <li><a href="http://cordova.apache.org/" title="Platform for building native mobile applications using HTML, CSS and JavaScript">Cordova</a></li>
- <li><a href="http://couchdb.apache.org/" title="RESTful document database">CouchDB</a></li>
- <li><a href="http://creadur.apache.org/" title="Comprehension and auditing of software distributions">Creadur</a></li>
- <li><a href="http://crunch.apache.org/" title="Simple and Efficient MapReduce Pipelines">Crunch</a></li>
- <li><a href="http://ctakes.apache.org/" title="Natural language processing (NLP) tool for information extraction from electronic medical record clinical free-text">cTAKES</a></li>
- <li><a href="http://curator.apache.org/" title="Java libraries that make using Apache ZooKeeper easier">Curator</a></li>
- <li><a href="http://cxf.apache.org/" title="Service Framework">CXF</a></li>
- <li><a href="http://db.apache.org/" title="Database access">DB</a></li>
- <li><a href="http://deltacloud.apache.org/" title="RESTful cloud management interface">Deltacloud</a></li>
- <li><a href="http://deltaspike.apache.org/" title="Portable CDI extensions that provide useful features for Java application developers">DeltaSpike</a></li>
- <li><a href="http://directmemory.apache.org/" title="An off-heap cache for the Java Virtual

Machine">DirectMemory</a></li>

<li><a href="http://directory.apache.org/" title="Apache Directory Server">Directory</a></li>

<li><a href="http://empire-db.apache.org/" title="Relational Data Persistence">Empire-db</a></li>

<li><a href="http://etch.apache.org/" title="Cross-platform, language- and transport-independent RPC-like messaging framework">Etch</a></li>

<li><a href="http://felix.apache.org/" title="OSGi Framework and components.">Felix</a></li>

<li><a href="http://flex.apache.org/" title="Application framework for expressive web applications that deploy to all major browsers, desktops and devices.">Flex</a></li>

<li><a href="http://flume.apache.org/" title="A reliable service for efficiently collecting, aggregating, and moving large amounts of log data">Flume</a></li>

<li><a href="http://forrest.apache.org/" title="Aggregated multi-channel documentation, separation of concerns">Forrest</a></li>

<li><a href="http://geronimo.apache.org/" title="Java2, Enterprise Edition (J2EE) container">Geronimo</a></li>

<li><a href="http://giraph.apache.org/" title="Iterative graph processing system built for high scalability">Giraph</a></li>

<li><a href="http://gora.apache.org/" title="ORM framework for column stores such as Apache HBase and Apache Cassandra with a specific focus on Hadoop">Gora</a></li>

<li><a href="http://gump.apache.org/" title="Continuous integration of open source projects">Gump</a></li>

<li><a href="http://hadoop.apache.org/" title="Distributed computing platform">Hadoop</a></li>

<li><a href="http://hama.apache.org/" title="a Bulk Synchronous Parallel computing framework on top of Hadoop">Hama</a></li>

<li><a href="http://hbase.apache.org/" title="Hadoop Database">HBase</a></li>

<li><a href="http://helix.apache.org/" title="A cluster management framework for partitioned and replicated distributed resources">Helix</a></li>

<li><a href="http://hive.apache.org/" title="Data warehouse infrastructure using the Hadoop Database">Hive</a></li>

<li><a href="http://hc.apache.org/" title="Java toolset of low level HTTP components">HttpComponents</a></li>

<li><a href="http://isis.apache.org/" title="Framework for rapidly developing domain-driven apps in Java">Isis</a></li>

<li><a href="http://jackrabbit.apache.org/" title="Content Repository for Java">Jackrabbit</a></li>

<li><a href="http://james.apache.org/" title="Java Apache Mail Enterprise Server">James</a></li>

<li><a href="http://jclouds.apache.org/" title="Java cloud APIs and abstractions">jclouds</a></li>

<li><a href="http://jena.apache.org/" title="Java framework for building Semantic Web applications">Jena</a></li>

<li><a href="http://jmeter.apache.org/" title="Java performance and functional testing">JMeter</a></li>

<li><a href="http://jspwiki.apache.org/" title="Leading open source WikiWiki engine, feature-rich and built around standard J2EE components (Java, servlets, JSP). ">JSPWiki</a></li>

<li><a href="http://juddi.apache.org/" title="Java implementation of the Universal Description, Discovery, and Integration specification">jUDDI</a></li>

<li><a href="http://kafka.apache.org/" title="Distributed publish-subscribe messaging system">Kafka</a></li>

<li><a href="http://karaf.apache.org/" title="Server-side OSGi distribution">Karaf</a></li>

<li><a href="http://knox.apache.org/" title="Simplify and normalize the deployment and implementation of secure Hadoop clusters">Knox</a></li>

<li><a href="http://lenya.apache.org/" title="Content Management System">Lenya</a></li>

<li><a href="http://libcloud.apache.org/" title="Unified interface to the cloud">Libcloud</a></li>

<li><a href="http://logging.apache.org/" title="Cross-language logging services">Logging</a></li>

<li><a href="http://lucene.apache.org/" title="Search engine library">Lucene</a></li>

<li><a href="http://lucenenet.apache.org/" title="Search engine library targeted at .NET runtime

users.">Lucene.Net</a></li>

<li><a href="http://lucy.apache.org/" title="Search engine library for dynamic languages">Lucy</a></li>

<li><a href="http://mahout.apache.org/" title="Scalable machine learning library">Mahout</a></li>

<li><a href="http://manifoldcf.apache.org/" title="Framework for connecting source content repositories to target repositories or indexes.">ManifoldCF</a></li>

<li><a href="http://marmotta.apache.org/" title="An Open Platform for Linked Data">Marmotta</a></li>

<li><a href="http://maven.apache.org/" title="Java project management and comprehension tools">Maven</a></li>

<li><a href="http://mesos.apache.org/" title="a cluster manager that provides efficient resource isolation and sharing across distributed applications">Mesos</a></li>

<li><a href="http://mina.apache.org/" title="Multipurpose Infrastructure for Network Application">MINA</a></li>

<li><a href="http://mrunit.apache.org/" title="Java library that helps developers unit test Apache Hadoop map reduce jobs">MRUnit</a></li>

<li><a href="http://myfaces.apache.org/" title="JavaServer(tm) Faces implementation and components">MyFaces</a></li>

<li><a href="http://nutch.apache.org/" title="Open Source Web Search Software">Nutch</a></li>

<li><a href="http://ode.apache.org/" title="Orchestration Director Engine: Business Process Management (BPM), Process Orchestration and Workflow through service composition.">ODE</a></li>

<li><a href="http://ofbiz.apache.org/" title="Open for Business: enterprise automation software">OFBiz</a></li>

<li><a href="http://olingo.apache.org/" title="OASIS OData protocol libraries">Olingo</a></li>

<li><a href="http://oltu.apache.org/" title="OAuth protocol implementation in Java">Oltu</a></li>

<li><a href="http://onami.apache.org/" title="Development and maintenance of a set of Google Guice extensions">Onami</a></li>

<li><a href="http://oodt.apache.org/" title="Object Oriented Data Technology (middleware metadata)">OODT</a></li>

<li><a href="http://oozie.apache.org/" title="A workflow scheduler system to manage Apache Hadoop jobs.">Oozie</a></li>

<li><a href="http://climate.apache.org/" title="Climate model evaluation">Open Climate Workbench</a></li>

<li><a href="http://openjpa.apache.org/" title="OpenJPA: Object Relational Mapping for Java">OpenJPA</a></li>

<li><a href="http://openmeetings.apache.org/" title="OpenMeetings: Web-Conferencing and real-time collaboration">OpenMeetings</a></li>

<li><a href="http://opennlp.apache.org/" title="Machine learning based toolkit for the processing of natural language text">OpenNLP</a></li>

<li><a href="http://openoffice.apache.org/" title="An open-source, office-document productivity suite">OpenOffice</a></li>

<li><a href="http://openwebbeans.apache.org/" title="OpenWebBeans: JSR-299 Context and Dependency Injection for Java EE Platform Implementation">OpenWebBeans</a></li>

<li><a href="http://pdfbox.apache.org/" title="Java library for working with PDF documents">PDFBox</a></li>

<li><a href="http://perl.apache.org/" title="Dynamic websites using Perl">Perl</a></li>

<li><a href="http://pig.apache.org/" title="Platform for analyzing large data sets">Pig</a></li>

<li><a href="http://pivot.apache.org/" title="Rich Internet applications in Java">Pivot</a></li>

<li><a href="http://poi.apache.org/" title="Java API for OLE 2 Compound and OOXML Documents">POI</a></li>

<li><a href="http://portals.apache.org/" title="Portal technology">Portals</a></li>

<li><a href="http://qpuid.apache.org/" title="Multiple language implementation of the latest Advanced Message Queuing Protocol (AMQP)">Qpid</a></li>

<li><a href="http://rave.apache.org/" title="Web and social mashup engine">Rave</a></li>

<li><a href="http://river.apache.org/" title="Jini service oriented architecture">River</a></li>

<li><a href="http://roller.apache.org/" title="Java blog server">Roller</a></li>

<li><a href="http://santuario.apache.org/" title="XML Security in Java and C++">Santuario</a></li>

- <li><a href="http://servicemix.apache.org/" title="Enterprise Service Bus">ServiceMix</a></li>
- <li><a href="http://shindig.apache.org/" title="Opensocial Reference Implementation">Shindig</a></li>
- <li><a href="http://shiro.apache.org/" title="Powerful and easy-to-use application security framework">Shiro</a></li>
- <li><a href="http://sis.apache.org/" title="Spatial Information System">SIS</a></li>
- <li><a href="http://sling.apache.org/" title="Web Framework for JCR Content Repositories">Sling</a></li>
- <li><a href="http://spamassassin.apache.org/" title="Mail filter to identify spam">SpamAssassin</a></li>
- <li><a href="http://spark.apache.org/" title="Fast and general engine for large-scale data processing">Spark</a></li>
- <li><a href="http://sqoop.apache.org/" title="Bulk Data Transfer for Hadoop and Structured Datastores">Sqoop</a></li>
- <li><a href="http://stanbol.apache.org/" title="Reusable components for semantic content management">Stanbol</a></li>
- <li><a href="http://steve.apache.org/" title="Apache's Python based single transferable vote software system">STeVe</a></li>
- <li><a href="http://storm.apache.org/" title="Distributed, real-time computation system">Storm</a></li>
- <li><a href="http://struts.apache.org/" title="Model 2 framework for building Java web applications">Struts</a></li>
- <li><a href="http://subversion.apache.org/" title="Version Control">Subversion</a></li>
- <li><a href="http://synapse.apache.org/" title="Enterprise Service Bus and Mediation Framework">Synapse</a></li>
- <li><a href="http://syncope.apache.org/" title="Managing digital identities in enterprise environments">Syncope</a></li>
- <li><a href="http://tajo.apache.org/" title="Big data warehouse system on Hadoop">Tajo</a></li>
- <li><a href="http://tapestry.apache.org/" title="Component-based Java Web Application Framework">Tapestry</a></li>
- <li><a href="http://tcl.apache.org/" title="Dynamic websites using TCL">Tcl</a></li>
- <li><a href="http://tez.apache.org/" title="High-performance and scalable distributed data processing framework">Tez</a></li>
- <li><a href="http://thrift.apache.org/" title="Framework for scalable cross-language services development">Thrift</a></li>
- <li><a href="http://tika.apache.org" title="Content Analysis and Detection Toolkit">Tika</a></li>
- <li><a href="http://tiles.apache.org/" title="A templating framework for web application user interfaces">Tiles</a></li>
- <li><a href="http://tomcat.apache.org/" title="A Java Servlet and JSP Container">Tomcat</a></li>
- <li><a href="http://tomEE.apache.org/" title="Java EE Web Profile built on Tomcat">TomEE</a></li>
- <li><a href="http://trafficserver.apache.org/" title="A fast, scalable and extensible HTTP/1.1 compliant caching proxy server">Traffic Server</a></li>
- <li><a href="http://turbine.apache.org/" title="A Java Servlet Web Application Framework and associated component library">Turbine</a></li>
- <li><a href="http://tuscany.apache.org/" title="An SCA based Service Composition Framework">Tuscany</a></li>
- <li><a href="http://uima.apache.org/" title="Framework and annotators for unstructured information analysis">UIMA</a></li>
- <li><a href="http://vcl.apache.org/" title="Virtual Computing Lab">VCL</a></li>
- <li><a href="http://velocity.apache.org/" title="A Java Templating Engine">Velocity</a></li>
- <li><a href="http://vxquery.apache.org/" title="A parallel XQuery processor">VXQuery</a></li>
- <li><a href="http://ws.apache.org/" title="Projects related to Web Services">Web Services</a></li>
- <li><a href="http://whirr.apache.org/" title="Libraries for running Cloud Services">Whirr</a></li>

- [Wicket](http://wicket.apache.org/ "Component-based Java Web Application Framework.")
- [Wink](http://wink.apache.org/ "RESTful Web services Framework")
- [Wookie](http://wookie.apache.org/ "Widgets for Applications")
- [Xalan](http://xalan.apache.org/ "XSLT processors in Java and C++")
- [Xerces](http://xerces.apache.org/ "XML parsers in Java, C++ and Perl")
- [XMLBeans](http://xmlbeans.apache.org/ "XML-Java binding tool")
- [XML Graphics](http://xmlgraphics.apache.org/ "Conversion from XML to graphical output")
- [ZooKeeper](http://zookeeper.apache.org/ "Centralized service for maintaining configuration information")

</div>

<div class="grid\_3">

<h4>Foundation</h4>

<ul>

<li><a href="/foundation/faq.html">FAQ</a></li>

<li><a href="/foundation/glossary.html">Glossary</a></li>

<li><a href="/licenses/" title="Overview of the Apache Licenses">Licenses</a></li>

<li><a href="/foundation/marks/" title="Apache marks policies and listing">Trademarks</a></li>

<li><a href="/foundation/news.html" title="Official news feed of Foundation announcements">News</a></li>

<li><a href="/press/" title="Press, Media, and Analyst contact">Press Inquiries</a></li>

<li><a href="/foundation/records/" title="Formal corporate records and board meeting minutes">Public Records</a></li>

<li><a href="/foundation/maillinglists.html" title="Mailing lists and Apache">Mailing Lists</a></li>

<li><a href="/foundation/sponsorship.html" title="Sponsor the Foundation">Sponsorship</a></li>

<li><a href="/foundation/contributing.html" title="Donate to the Foundation">Donations</a></li>

<li><a href="/foundation/buy\_stuff.html" title="Buy Apache branded merchandise">Buy Stuff</a></li>

<li><a href="/foundation/thanks.html" title="Thank you to our Sponsors">Thanks</a></li>

<li><a href="/foundation/contact.html" title="Contact Us">Contact</a></li>

</ul>

</div>

<div class="grid\_3 suffix\_1">

<h4>Foundation Projects</h4>

<ul>

<li><a href="http://attic.apache.org/" title="Inactive projects repository">Attic</a></li>

<li><a href="/foundation/conferences.html" title="Meetings of developers and users">Conferences</a></li>

<li><a href="http://community.apache.org/" title="Helping newcomers to the ASF">Community Development</a></li>

<li><a href="http://incubator.apache.org/" title="Shepherd for new projects">Incubator</a></li>

<li><a href="/dev/" title="ASF Infrastructure: Operations and howto documents for PMCs and contributors">Infrastructure</a></li>

<li><a href="http://labs.apache.org/" title="The Innovation Laboratories of the Apache Software Foundation">Labs</a></li>

<li><a href="/legal/" title="Legal Affairs">Legal Affairs</a></li>

<li><a href="/press/" title="Public Relations">Public Relations</a></li>

<li><a href="/security/" title="Security">Security</a></li>

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<li><a href="/travel/" title="Travel Assistance">Travel Assistance</a></li>
</ul>
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<div class="grid_3">
  <h4>Community</h4>
  <ul>
    <li><a href="http://people.apache.org/" title="Apache committer homepages">People</a></li>
    <li><a href="/memorials/" title="In memoriam of past committers">Memorials</a></li>
    <li><a href="http://feathercast.apache.org/" title="Apache Podcasts">Feathercast</a></li>
    <li><a href="http://blogs.apache.org/" title="Apache Project Blogs">Project Blogs</a></li>
    <li><a href="http://planet.apache.org/committers/" title="Apache Committers' Blogs">PlanetApache</a></li>

  </ul>
</div>
<div class="grid_3">
  <h4>How It Works</h4>
  <ul>
    <li><a href="/foundation/how-it-works.html">Introduction</a></li>
    <li><a href="/foundation/how-it-works.html#meritocracy">Meritocracy</a></li>
    <li><a href="/foundation/how-it-works.html#structure">Structure</a></li>
    <li><a href="/foundation/how-it-works.html#roles">Roles</a></li>
    <li><a href="/foundation/how-it-works.html#management">Collaboration</a></li>
    <li><a href="/foundation/how-it-works.html#incubator">Incubator</a></li>
    <li><a href="/foundation/how-it-works.html#other">Other entities</a></li>
    <li><a href="/foundation/glossary.html">Glossary</a></li>
    <li><a href="/foundation/voting.html">Voting</a></li>
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jar/io/github/resilience4j/core/Event.java
* /opt/cola/permits/1274699229_1654840286.013314/0/resilience4j-core-0-13-1-sources-
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jar/io/github/resilience4j/core/EventConsumer.java
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jar/io/github/resilience4j/core/EventPublisher.java
* /opt/cola/permits/1274699229_1654840286.013314/0/resilience4j-core-0-13-1-sources-
jar/io/github/resilience4j/core/StopWatch.java
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- Henning Schmiedehausen
- Jax Law
- maniax, for finding a nasty bug in named parameter substitution
- Robert Sfeir, for batch processing feature requests
- Henry Yandell, for `in` clause expansion feature request
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# Jdbi 3

- Steven Schlansker
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```
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
jar/io/micronaut/rxjava3/instrument/RxInstrumentedComponent.java
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
jar/io/micronaut/rxjava3/instrument/RxInstrumentedCompletableObserver.java
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
jar/io/micronaut/rxjava3/converters/RxJava2ToRxJava3ConveterRegistrar.java
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
jar/io/micronaut/rxjava3/instrument/RxInstrumentedParallelFlowable.java
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
jar/io/micronaut/rxjava3/instrument/RxInstrumentedSingleObserver.java
* /opt/cola/permits/1331474197_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-
```

jar/io/micronaut/rxjava3/instrument/RxInstrumentedConnectableFlowable.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedObserver.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedObservable.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/converters/RxJava3ConverterRegistrar.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedCompletable.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedMaybeObserver.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedConnectableObservable.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxJava3Instrumentation.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedWrappers.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedFlowableSubscriber.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedFlowable.java  
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jar/io/micronaut/rxjava3/instrument/RxInstrumentedSubscriber.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedMaybe.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumentedSingle.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/RxInstrumenterFactory.java  
\* /opt/cola/permits/1331474197\_1653513200.9120781/0/micronaut-rxjava3-2-2-1-sources-  
jar/io/micronaut/rxjava3/instrument/package-info.java

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# Jackson JSON processor

Jackson is a high-performance, Free/Open Source JSON processing library.

It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007.

It is currently developed by a community of developers, as well as supported commercially by FasterXML.com.

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```
* /opt/cola/permits/1331473995_1653068669.1105134/0/docker-java-transport-3-2-12-sources-
jar/com/github/dockerjava/transport/LinuxDomainSocket.java
* /opt/cola/permits/1331473995_1653068669.1105134/0/docker-java-transport-3-2-12-sources-
jar/com/github/dockerjava/transport/FileDescriptor.java
* /opt/cola/permits/1331473995_1653068669.1105134/0/docker-java-transport-3-2-12-sources-
jar/com/github/dockerjava/transport/DomainSocket.java
* /opt/cola/permits/1331473995_1653068669.1105134/0/docker-java-transport-3-2-12-sources-
jar/com/github/dockerjava/transport/BsdDomainSocket.java
* /opt/cola/permits/1331473995_1653068669.1105134/0/docker-java-transport-3-2-12-sources-
jar/com/github/dockerjava/transport/AbstractSocket.java
```

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Found in path(s):

\* /opt/cola/permits/1288695178\_1648173860.38/0/netty-tcnative-classes-2-0-48-final-jar/META-INF/maven/io.netty/netty-tcnative-classes/pom.xml

No license file was found, but licenses were detected in source scan.

Manifest-Version: 1.0  
Implementation-Title: Netty/TomcatNative [OpenSSL - Classes]  
Bundle-Description: A Mavenized fork of Tomcat Native which incorporates various patches. This artifact is dynamically linked to OpenSSL and Apache APR.  
Automatic-Module-Name: io.netty.internal.tcnative  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.txt>  
Bundle-SymbolicName: io.netty.tcnative-classes  
Implementation-Version: 2.0.48.Final  
Built-By: norman  
Bnd-LastModified: 1643125583217  
Bundle-ManifestVersion: 2  
Implementation-Vendor-Id: io.netty  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"  
Tool: Bnd-5.1.1.202006162103  
Export-Package: io.netty.internal.tcnative;version="2.0.48"  
Bundle-Name: Netty/TomcatNative [OpenSSL - Classes]  
Bundle-Version: 2.0.48.Final  
Build-Jdk-Spec: 1.8  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_252  
Implementation-URL: <https://github.com/netty/netty-tcnative/netty-tcnative-classes/>

Found in path(s):

\* /opt/cola/permits/1288695178\_1648173860.38/0/netty-tcnative-classes-2-0-48-final-jar/META-INF/MANIFEST.MF

# 1.234 fabric8-:::-kubernetes-model-:::-autoscaling 4.10.3

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# 1.235 metrics-integration-with-jmx 4.1.29

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## 1.236 micronaut-gcp 4.1.1

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```

Found in path(s):

```
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-  
jar/io/micronaut/gcp/GoogleCloudConfiguration.java  
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-  
jar/io/micronaut/discovery/cloud/gcp/GoogleComputeMetadataKeys.java  
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-  
jar/io/micronaut/gcp/credentials/GoogleCredentialsConfiguration.java  
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-  
jar/io/micronaut/discovery/cloud/gcp/GoogleComputeInstanceMetadataResolver.java  
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-  
jar/io/micronaut/gcp/UserAgentHeaderProvider.java
```

```
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/gcp/condition/RequiresProjectIdCondition.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/discovery/cloud/gcp/package-info.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/gcp/Modules.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/discovery/cloud/gcp/GoogleComputeNetworkInterface.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/discovery/cloud/gcp/GoogleComputeInstanceMetadata.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/discovery/cloud/gcp/GoogleComputeMetadataConfiguration.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/gcp/credentials/GoogleCredentialsFactory.java
* /opt/cola/permits/1331473977_1653513089.549853/0/micronaut-gcp-common-4-1-1-sources-
jar/io/micronaut/gcp/condition/RequiresGoogleProjectId.java
```

## 1.237 protobuf-java 3.19.4

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Found in path(s):

```
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/descriptor.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/duration.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/struct.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-
jar/google/protobuf/field_mask.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-
jar/google/protobuf/compiler/plugin.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/empty.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/type.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/any.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/wrappers.proto
* /opt/cola/permits/1454789367_1666952560.680916/0/protobuf-java-3-19-4-4-
jar/google/protobuf/timestamp.proto
```

\* /opt/cola/permits/1454789367\_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/source\_context.proto  
\* /opt/cola/permits/1454789367\_1666952560.680916/0/protobuf-java-3-19-4-4-jar/google/protobuf/api.proto  
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Manifest-Version: 1.0  
Automatic-Module-Name: com.google.protobuf  
Bnd-LastModified: 1643389670477  
Build-Jdk: 1.8.0\_181-google-v7  
Built-By: acozzette  
Bundle-Description: Core Protocol Buffers library. Protocol Buffers are a way of encoding structured data in an efficient yet extensible format.  
Bundle-DocURL: <https://developers.google.com/protocol-buffers/>  
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Bundle-ManifestVersion: 2  
Bundle-Name: Protocol Buffers [Core]  
Bundle-SymbolicName: com.google.protobuf  
Bundle-Version: 3.19.4  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.google.protobuf;version="3.19.4"  
Import-Package: sun.misc;resolution:=optional,com.google.protobuf;version="[3.19,4)"  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.7))"  
Tool: Bnd-3.0.0.201509101326

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\* /opt/cola/permits/1454789367\_1666952560.680916/0/protobuf-java-3-19-4-4-jar/META-INF/MANIFEST.MF

# 1.238 micronaut-rxjava-2 1.2.1

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\* <https://github.com/JCTools/JCTools>

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  - \* <https://github.com/jpountz/lz4-java>

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\* HOMEPAGE:

\* <https://github.com/hyperxpro/Brotli4j>

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A copy is also included with both the the downloadable source code package and jar that contains class bytecodes, as file "ASL 2.0". In both cases, that file should be located next to this file: in source distribution the location should be "release-notes/asl"; and in jar "META-INF/" Apache Harmony

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## 1.240 jna 5.7.0

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#### Maven Ant Tasks

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Modified by Atlassian

The binary file of the original library has been modified by Atlassian in such way that classes have changed their package names from 'org.jfree' to 'clover.org.jfree'. This was necessary to avoid potential name conflicts during instrumentation of a code using the original library when using Clover. No source code of the original library was modified.

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David Megginson, [david@megginson.com](mailto:david@megginson.com)  
2000-05-05

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The binary file of the original library has been modified by Atlassian in such way that classes have changed their package names from 'com.keypoint/org.jfree' to 'clover.com.keypoint/clover.org.jfree'. This was necessary to avoid potential name conflicts during instrumentation of a code using the original library when using Clover. No source code of the original library was modified.

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The primary ANTLR guy:

Terence Parr  
parrt@cs.usfca.edu  
parrt@antlr.org

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File: Core.js

Description:

Provides common utility functions and the Class object used internally by the library.

Also provides the <TreeUtil> object for manipulating JSON tree structures

Some of the Basic utility functions and the Class system are based in the MooTools Framework <<http://mootools.net>>. Copyright (c) 2006-2009 Valerio Proietti, <<http://mad4milk.net/>>. MIT license <<http://mootools.net/license.txt>>.

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# 1.242 jakarta-annotations-api 2.0.0

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reactor.core.scheduler.ReactorBlockHoundIntegration

Found in path(s):

\* /opt/cola/permits/1418559433\_1663305970.0121932/0/reactor-core-3-4-15-2-jar/META-INF/services/reactor.blockhound.integration.BlockHoundIntegration

## 1.244 metrics-integration-for-apache- httpasyncclient 4.0.5

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Manifest-Version: 1.0

Bnd-LastModified: 1545937994519

Build-Jdk: 1.8.0\_191

Built-By: artem

Bundle-Description: An Apache HttpClient wrapper providing Metrics instrumentation of connection pools, request durations and rates, and other useful information.

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Bundle-ManifestVersion: 2

Bundle-Name: Metrics Integration for Apache HttpClient

Bundle-SymbolicName: io.dropwizard.metrics.httpasyncclient

Bundle-Version: 4.0.5

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.httpasyncclient;uses:="com.codahale.metrics,com.codahale.metrics.httpClient,org.apache.http.config,org.apache.http.conn,org.apache.http.impl.nio.client,org.apache.http.impl.nio.conn,org.apache.http.nio.conn,org.apache.http.nio.reactor";version="4.0.5"

Implementation-Title: Metrics Integration for Apache HttpClient

Implementation-URL: <http://metrics.dropwizard.io/metrics-httpasyncclient>

Implementation-Vendor-Id: io.dropwizard.metrics

Implementation-Version: 4.0.5

Import-Package: com.codahale.metrics;version="[4.0,5)",com.codahale.metrics.httpClient;version="[4.0,5)",org.apache.http,org.apache.http.concurrent,org.apache.http.config,org.apache.http.conn,org.apache.http.impl.nio.client,org.apache.http.impl.nio.conn,org.apache.http.nio.conn,org.apache.http.nio.protocol,org.apache.http.nio.reactor,org.apache.http.pool,org.apache.http.protocol

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1340031649\_1654689479.4970224/0/metrics-httpasyncclient-4-0-5-jar/META-INF/MANIFEST.MF

## 1.245 micronaut 3.5.0

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```
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/FormatMethod.java
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
```

jar/com/google/errorprone/annotations/DoNotMock.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/RestrictedApi.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/CompatibleWith.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/FormatString.java  
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jar/com/google/errorprone/annotations/CanIgnoreReturnValue.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/Var.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/CompileTimeConstant.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/ForOverride.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/Immutable.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/concurrent/LazyInit.java  
\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-  
jar/com/google/errorprone/annotations/RequiredModifiers.java  
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 */
```

Found in path(s):

```
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/CheckReturnValue.java
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/DoNotCall.java
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/concurrent/GuardedBy.java
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/OverridingMethodsMustInvokeSuper.java
```

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```
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```

Found in path(s):

```
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/concurrent/UnlockMethod.java
* /opt/cola/permits/1206721250_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-
jar/com/google/errorprone/annotations/NoAllocation.java
```

\* /opt/cola/permits/1206721250\_1632455727.58/0/error-prone-annotations-2-5-1-sources-2-jar/com/google/errorprone/annotations/concurrent/LockMethod.java

# 1.250 logback-core 1.2.11

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Found in path(s):

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/ContextAwareImpl.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/ConsoleAppender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/InterpretationContext.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/BoldBlueCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/ConverterUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/FileNamePattern.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/InfoStatus.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/ParamAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/SyslogAppenderBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/event/stax/EndEvent.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/encoder/EchoEncoder.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/ArchiveRemover.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/ConfigurableSSLServerSocketFactory.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/node/ComponentNode.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/LocationUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/subst/Parser.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/PatternLayoutBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/FormattingNode.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/TimestampAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/encoder/NonClosableInputStream.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/subst/Tokenizer.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/ServerSocketListener.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/AutoFlushingObjectWriter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/AbstractEventEvaluatorAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/event/EndEvent.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/AppenderAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SSLConfigurable.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/FormattingConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/SyslogConstants.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/SSLServerSocketAppenderBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SSLContextFactoryBean.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SSLConfigurableServerSocket.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/sift/AbstractDiscriminator.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/AppenderAttachable.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/AbstractComponentTracker.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/PropertyContainer.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/sift/SiftingJoranConfiguratorBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/html/CssBuilder.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/EnvUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/PeriodicityType.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/ServerRunner.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/RemoteReceiverClient.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/BasicStatusManager.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/SyslogOutputStream.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/SimpleKeywordNode.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/conditional/IfAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/sift/AppenderFactory.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/RedCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/CharSequenceToRegexMapper.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/AppenderBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/SizeBasedTriggeringPolicy.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/encoder/LayoutWrappingEncoder.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/ClientVisitor.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/Loader.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/PropertyDefinerBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/ReplacingCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/ANSIConstants.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/helpers/ThrowableToStringArray.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/CharSequenceState.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/DelayStrategy.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/TrustManagerFactoryFactoryBean.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/Node.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/event/InPlayListener.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SSLConfiguration.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/StatusUtil.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/recovery/ResilientSyslogOutputStream.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/DynamicClassLoadingException.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/PropertySetterException.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/SMTPAppenderBase.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ObjectWriterFactory.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/AppenderAttachableImpl.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/ServerListener.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/DefaultTimeBasedFileNamingAndTriggeringPolicy.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/layout/EchoLayout.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/DateTokenConverter.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/ErrorStatus.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/recovery/ResilientOutputStreamBase.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/FileUtil.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/ComponentTracker.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SSLConfigurableSocket.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/util/IEscapeUtil.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/FilterReply.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/ElementPath.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/IADDataForComplexProperty.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/LoginAuthenticator.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/FixedDelay.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/Appender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/StatusListenerAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/LayoutBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/AbstractSocketAppender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/SizeAndTimeBasedFNATP.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/html/NOPTrowableRenderer.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/DatePatternToRegexUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/SocketConnector.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/Compiler.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/PatternLayoutEncoderBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/ActionConst.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/DefaultSocketConnector.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/Parser.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/hook/ShutdownHookBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/util/ConfigurationWatchListUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/util/RegularEscapeUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/util/PropertySetter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/FileFilterUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/StatusBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/StatusManager.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/FilterAttachable.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/sift/Discriminator.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/WarnStatus.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/hook/ShutdownHook.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/AbstractServerSocketAppender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/FormatInfo.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/CyclicBufferTracker.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/Duration.java

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\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/read/CyclicBufferAppender.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/RollingPolicy.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/CompressionMode.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/IntegerTokenConverter.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/ContextAwareBase.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/spi/LifeCycle.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/FileStoreUtil.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/CloseUtil.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/helpers/Transform.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/conditional/ThenAction.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/util/StatusPrinter.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/boolex/EvaluationException.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/status/StatusListener.java  
\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/util/AlmostAsIsEscapeUtil.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/FileAppender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/JoranConfiguratorBase.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/KeyManagerFactoryFactoryBean.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/helper/Compressor.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/ssl/SecureRandomFactoryBean.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/ActionException.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/YellowCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/rolling/TimeBasedRollingPolicy.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/sift/AppenderTracker.java

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\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/BoldCyanCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/conditional/ElseAction.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/ConcurrentServerRunner.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/ConfigurationWatchList.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/parser/CompositeNode.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/helpers/NOPAppender.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/DefaultClass.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/property/ResourceExistsPropertyDefiner.java

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\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/subst/NodeToStringTransformer.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/net/server/Client.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/pattern/color/BoldMagentaCompositeConverter.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/spi/RuleStore.java

\* /opt/cola/permits/1337069885\_1654119262.0130525/0/logback-core-1-2-11-sources-3-jar/ch/qos/logback/core/joran/action/PropertyAction.java

# 1.251 jackson-bom 2.13.3

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# 1.252 animal-sniffer-annotation 1.19

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## 1.253 micronaut-problem-json 2.2.3

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# 1.254 couchbase-jvm-core-io 1.7.18

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# Jackson JSON processor

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It was originally written by Tatu Saloranta ([tatu.saloranta@iki.fi](mailto:tatu.saloranta@iki.fi)), and has been in development since 2007.

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## 1.256 google-android-annotations-library

### 4.1.1.4

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 */
```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1014842714_1591897072.99/0/annotations-4-1-1-4-sources-
jar/android/annotation/SuppressWarnings.java
* /opt/ws_local/PERMITS_SQL/1014842714_1591897072.99/0/annotations-4-1-1-4-sources-
jar/android/annotation/TargetApi.java
```

## 1.257 jvm-integration-for-metrics 4.1.29

#### 1.257.1 Available under license :

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Manifest-Version: 1.0  
Automatic-Module-Name: com.codahale.metrics.jvm  
Build-Jdk-Spec: 1.8

Bundle-Description: A set of classes which allow you to monitor critical aspects of your Java Virtual Machine using Metrics.  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: JVM Integration for Metrics  
Bundle-SymbolicName: io.dropwizard.metrics.jvm  
Bundle-Version: 4.1.29  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.jvm;uses:="com.codahale.metrics,javax.management";version="4.1.29"  
Implementation-Title: JVM Integration for Metrics  
Implementation-Version: 4.1.29  
Import-Package: org.slf4j;version="[1.6.0,2.0.0)",com.sun.management;resolution:=optional,com.codahale.metrics;version="[4.1,5)",javax.management  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473592173\_1668797757.6042671/0/metrics-jvm-4-1-29-jar/META-INF/MANIFEST.MF

## 1.258 jsr311-api 1.1.1

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```

## 1.259 opentest4j-opentest4j 1.2.0

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# 1.260 ssl-config-core 0.3.8

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Manifest-Version: 1.0  
Automatic-Module-Name: ssl.config.core  
Bnd-LastModified: 1560601708093  
Bundle-Description: ssl-config-core  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.txt>;description=Apache-2.0  
Bundle-ManifestVersion: 2  
Bundle-Name: ssl-config-core  
Bundle-SymbolicName: com.typesafe.sslconfig  
Bundle-Vendor: Lightbend  
Bundle-Version: 0.3.8  
Created-By: 1.8.0\_171 (Oracle Corporation)  
Export-Package: com.typesafe.sslconfig.ssl;version="0.3.8";uses:="com.typesafe.config,com.typesafe.sslconfig.util,javax.naming ldap,javax.net.ssl,scala,scala.collection,scala.collection.immutable,scala.collection.mutable,scala.reflect,scala.runtime,scala.util.matching,scala.util.parsing.combinator,scala.util.parsing.input",com.typesafe.sslconfig.ssl.debug;version="0.3.8";uses:="com.typesafe.sslconfig.ssl,com.typesafe.sslconfig.util,scala,scala.collection.immutable,scala.reflect,scala.runtime",com.typesafe.sslconfig.util;version="0.3.8";uses:="com.typesafe.config,scala,scala.collection,scala.collection.immutable,scala.concurrent.duration,scala.reflect"  
Implementation-Title: ssl-config-core  
Implementation-Vendor: Lightbend  
Implementation-Vendor-Id: com.typesafe  
Implementation-Version: 0.3.8  
Import-Package: com.typesafe.config;version="[1.3.0,1.4.0)",com.typesafe.sslconfig.ssl;version="[0.3,1)",com.typesafe.sslconfig.util;version="[0.3,1)",javax.crypto,javax.crypto.interfaces,javax.crypto.spec,javax.naming,javax.naming ldap,javax.net.ssl,javax.security.auth.kerberos,javax.security.auth.x500,scala;version="[2.12,3)",scala.collection;version="[2.12,3)",scala.collection.convert;version="[2.12,3)",scala.collection.generic;version="[2.12,3)",scala.collection.immutable;version="[2.12,3)",scala.collection.mutable;version="[2.12,3)",scala.concurrent.duration;version="[2.12,3)",scala.reflect;version="[2.12,3)",scala.runtime;version="[2.12,3)",scala.runtime.java8;version="[2.12,3)",scala.util;version="[2.12,3)",scala.util.control;version="[2.12,3)",scala.util.matching;version="[2.12,3)",scala.util.parsing.combinator;version="[1.1,2)",scala.util.parsing.input;version="[1.1,2)"

Private-Package: com.typesafe.sslconfig.\*  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version>=1.8))"  
Specification-Title: ssl-config-core  
Specification-Vendor: Lightbend  
Specification-Version: 0.3.8  
Tool: Bnd-4.0.0.201805111645

Found in path(s):

\*/opt/cola/permits/1473592089\_1668798640.9743795/0/ssl-config-core-2-12-0-3-8-1-jar/META-INF/MANIFEST.MF

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# 1.262 metrics-integration-with-jmx 4.0.5

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Manifest-Version: 1.0  
Bnd-LastModified: 1545938260836  
Build-Jdk: 1.8.0\_191  
Built-By: artem  
Bundle-Description: A set of classes which allow you to report metrics via JMX.  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: Metrics Integration with JMX  
Bundle-SymbolicName: io.dropwizard.metrics.jmx  
Bundle-Version: 4.0.5  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.jmx;uses:="com.codahale.metrics,javax.management";version="4.0.5"  
Implementation-Title: Metrics Integration with JMX  
Implementation-URL: <http://metrics.dropwizard.io/metrics-jmx>  
Implementation-Vendor-Id: io.dropwizard.metrics  
Implementation-Version: 4.0.5  
Import-Package: org.slf4j;version="[1.6.0,2.0.0)",com.codahale.metrics;version="[4.0,5)",javax.management  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1274704779\_1648835825.49/0/metrics-jmx-4-0-5-jar/META-INF/MANIFEST.MF

# 1.263 jopt-simple 5.0.4

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## 1.265 jackson-module:-guice 2.13.3

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* /opt/cola/permits/1274700344_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/SegmentedByteString.kt
* /opt/cola/permits/1274700344_1645235023.94/0/okio-2-8-0-sources-
jar/commonMain/okio/SegmentedByteString.kt
* /opt/cola/permits/1274700344_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/ForwardingTimeout.kt
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\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/BufferedSource.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/Sink.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/Buffer.kt

\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/RealBufferedSink.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/BufferedSink.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/Source.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/RealBufferedSource.kt  
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\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/ForwardingSource.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/BufferedSink.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/JvmOkio.kt  
\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/Segment.kt  
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\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/GzipSource.kt  
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\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/Source.kt  
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\* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/-Platform.kt  
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- \* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/Pipe.kt
- \* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/jvmMain/okio/HashingSource.kt
- \* /opt/cola/permits/1274700344\_1645235023.94/0/okio-2-8-0-sources-jar/commonMain/okio/Options.kt

## 1.267 jackson-integration-for-metrics 4.0.5

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Manifest-Version: 1.0

Bnd-LastModified: 1545938158164

Build-Jdk: 1.8.0\_191

Built-By: artem

Bundle-Description: A set of Jackson modules which provide serializers for most Metrics classes.

Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>

Bundle-ManifestVersion: 2

Bundle-Name: Jackson Integration for Metrics

Bundle-SymbolicName: io.dropwizard.metrics.json

Bundle-Version: 4.0.5

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.json;uses:="com.codahale.metrics, com.fasterxml.jackson.core,com.fasterxml.jackson.databind";version="4.0.5"

Implementation-Title: Jackson Integration for Metrics

Implementation-URL: <http://metrics.dropwizard.io/metrics-json>

Implementation-Vendor-Id: io.dropwizard.metrics

Implementation-Version: 4.0.5

Import-Package: com.codahale.metrics;version="[4.0,5)",com.codahale.metrics.health;version="[4.0,5)";resolution:=optional,com.fasterxml.jackson.core;version="[2.9,3)",com.fasterxml.jackson.databind;version="[2.9,3)",com.fasterxml.jackson.databind.module;version="[2.9,3)",com.fasterxml.jackson.databind.ser;version="[2.9,3)",com.fasterxml.jackson.databind.ser.std;version="[2.9,3)"

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1274705522\_1648836004.08/0/metrics-json-4-0-5-jar/META-INF/MANIFEST.MF

# 1.268 javabeans-activation-framework-api

## 1.2.2

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[subs="normal"]

....

Specification: {doctitle}

Version: {revnumber}

ifeval::["{revremark}" != ""]

Status: {revremark}

endif::[]

ifeval::["{revremark}" == ""]

Status: Final Release

endif:[]

Release: {revdate}

....

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# 1.269 dropwizard-configuration-support

## 2.0.28

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# 1.270 joda-time 2.10.13

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## 1.272 utils 5.5.5

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# io.opentelemetry:opentelemetry-proto 1.6.0-alpha

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Found in path(s):

```
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/collector/logs/v1/logs_service.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/collector/metrics/v1/metrics_service.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/collector/trace/v1/trace_service.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/trace/v1/trace_config.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/metrics/experimental/metrics_config_service.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/trace/v1/trace.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/logs/v1/logs.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/metrics/v1/metrics.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/resource/v1/resource.proto  
* /opt/cola/permits/1310721520_1650882367.2/0/opentelemetry-proto-1-6-0-alpha-jar/opentelemetry/proto/common/v1/common.proto
```

# 1.274 swagger-models 2.1.12

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 */
```

Found in path(s):

```
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/EncodingProperty.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/security/SecurityScheme.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/examples/Example.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/FileSchema.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/servers/ServerVariables.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/MediaType.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/OpenAPI.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/Schema.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/XML.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/security/Scopes.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/ArraySchema.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
jar/io/swagger/v3/oas/models/media/DateTimeSchema.java
* /opt/cola/permits/1340076417_1654622411.2881706/0/swagger-models-2-1-12-sources-1-
```

jar/io/swagger/v3/oas/models/tags/Tag.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/PasswordSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/Paths.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/ObjectSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/parameters/RequestBody.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/security/OAuthFlow.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/parameters/QueryParameter.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/parameters/PathParameter.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/Encoding.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/UUIDSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/parameters/CookieParameter.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/headers/Header.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/callbacks/Callback.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/Content.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/links/Link.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/links/LinkParameter.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/security/OAuthFlows.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/info/Contact.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/ExternalDocumentation.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/EmailSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/BooleanSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
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\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/Components.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/StringSchema.java  
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jar/io/swagger/v3/oas/models/security/SecurityRequirement.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
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\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/BinarySchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/IntegerSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/NumberSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/parameters/Parameter.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/servers/Server.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/info/Info.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/ByteArraySchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/MapSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/Operation.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/servers/ServerVariable.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/DateSchema.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/info/License.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/responses/ApiResponse.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/PathItem.java  
\* /opt/cola/permits/1340076417\_1654622411.2881706/0/swagger-models-2-1-12-sources-1-  
jar/io/swagger/v3/oas/models/media/ComposedSchema.java

# 1.275 fabric8-:::-kubernetes-model-:::- extensions 4.10.3

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# 1.276 jacoco 0.8.5

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margin-left: 0.5in;
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margin-bottom: 0.05em;
}
</style>
</head>
<body>

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<link rel="shortcut icon" href="resources/report.gif" type="image/gif" />

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```
* /opt/cola/permits/1331473908_1653514800.6790595/0/micronaut-ktor-3-2-2-sources-
jar/io/micronaut/ktor/KtorApplicationBuilder.kt
* /opt/cola/permits/1331473908_1653514800.6790595/0/micronaut-ktor-3-2-2-sources-
jar/io/micronaut/ktor/KtorApplication.kt
* /opt/cola/permits/1331473908_1653514800.6790595/0/micronaut-ktor-3-2-2-sources-
jar/io/micronaut/ktor/server/AbstractKtorEmbeddedServer.kt
* /opt/cola/permits/1331473908_1653514800.6790595/0/micronaut-ktor-3-2-2-sources-
jar/io/micronaut/ktor/KtorRoutingBuilder.kt
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jar/io/micronaut/ktor/server/KtorTomcatEmbeddedServer.kt
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jar/io/micronaut/ktor/env/MicronautKtorEnvironmentConfig.kt
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- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/NaturalSortComparator.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperUtils.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperEndpoint.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/cloud/ZooKeeperServiceDiscoveryFactory.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperCuratorHelper.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperConnectionManager.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperCuratorConfiguration.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/cluster/ZooKeeperClusterView.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/AnyOfOperations.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/CreateOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/ZooKeeperConsumer.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/cloud/ZooKeeperServiceRegistryConfiguration.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/GetDataOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/cloud/ZooKeeperServiceDiscovery.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/DataChangedOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/SetDataOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/DeleteOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/ChildrenChangedOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/cloud/ZooKeeperServiceRegistry.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/OperationResult.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-jar/org/apache/camel/component/zookeeper/operations/ZooKeeperOperation.java
- \* /opt/cola/permits/1425206646\_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-

```

jar/org/apache/camel/component/zookeeper/operations/ExistenceChangedOperation.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/ZooKeeperProducer.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/operations/ZooKeeperHelper.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/SequenceComparator.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/ZooKeeperConfiguration.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/cluster/ZooKeeperClusterService.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/operations/FutureEventDrivenOperation.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/ZooKeeperComponent.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/operations/ExistsOperation.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/operations/GetChildrenOperation.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/ConnectionHolder.java
* /opt/cola/permits/1425206646_1663952692.6053333/0/camel-zookeeper-3-8-0-sources-2-
jar/org/apache/camel/component/zookeeper/operations/WatchedEventProvider.java

```

## 1.279 java-vault-driver 5.1.0

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- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/WritingBuffer.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/WritingBuffer\_Test.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/PrettyPrint.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/PrettyPrint\_Test.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/Json.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/Json\_Test.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/WriterConfig.java

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Found in path(s):

- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/ParseException\_Test.java
- \* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/test/mocking/Mocking\_Test.java

\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonObject.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/TestUtil.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonWriter\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonString\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonValue.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonParser.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonWriter.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/ParseException.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonObject\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonLiteral.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonNumber.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonArray.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonNumber\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonParser\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonLiteral\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonValue\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/test/java/com/bettercloud/vault/json/JsonArray\_Test.java  
\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/src/main/java/com/bettercloud/vault/json/JsonString.java

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## Vault Java Driver

=====

A zero-dependency Java client for the [Vault](<https://www.vaultproject.io/>) secrets management solution from HashiCorp.

This driver strives to implement Vault's full HTTP API, along with supporting functionality such as automatic retry handling. It does so without relying on any other external libraries beyond the Java standard library, and is compatible with Java 8 and up. So it will play nice with all of your projects, greenfield and legacy alike, without causing conflicts with any other dependency.

NOTE: Although the binary artifact produced by the project is backwards-compatible with Java 8, you do need JDK 9 or higher to modify or build the source code of this library itself.

This Change

-----

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Installing the Driver

-----

The driver is available from Maven Central, for all modern Java build systems.

Gradle:

---

```
dependencies {  
    implementation 'com.bettercloud:vault-java-driver:5.1.0'  
}
```

---

Maven:

---

```
<dependency>  
    <groupId>com.bettercloud</groupId>  
    <artifactId>vault-java-driver</artifactId>  
    <version>5.1.0</version>  
</dependency>
```

---

Initializing a Driver Instance

-----

The `com.bettercloud.vault.VaultConfig` class is used to initialize a driver instance with desired settings.

In the most basic use cases, where you are only supplying a Vault server address and perhaps a root token, there are convenience constructor methods available:

---

```

final VaultConfig config = new VaultConfig()
    .address("http://127.0.0.1:8200")
    .token("3c9fd6be-7bc2-9d1f-6fb3-cd746c0fc4e8")
    .build();

// You may choose not to provide a root token initially, if you plan to use
// the Vault driver to retrieve one programmatically from an auth backend.
final VaultConfig config = new VaultConfig().address("http://127.0.0.1:8200").build();
...

```

To explicitly set additional config parameters (\*), you can use a builder pattern style to construct the `VaultConfig` instance. Either way, the initialization process will try to populate any unset values by looking to environment variables.

```

...
final VaultConfig config =
    new VaultConfig()
        .address("http://127.0.0.1:8200") // Defaults to "VAULT_ADDR" environment variable
        .token("3c9fd6be-7bc2-9d1f-6fb3-cd746c0fc4e8") // Defaults to "VAULT_TOKEN" environment variable
        .openTimeout(5) // Defaults to "VAULT_OPEN_TIMEOUT" environment variable
        .readTimeout(30) // Defaults to "VAULT_READ_TIMEOUT" environment variable
        .sslConfig(new SslConfig().build()) // See "SSL Config" section below
        .build();
...

```

Once you have initialized a `VaultConfig` object, you can use it to construct an instance of the `Vault` primary driver class:

```

...
final Vault vault = new Vault(config);
...

```

### Key Value Secret Engine Config

-----

Shortly before its `1.0` release, Vault added a Version 2 of its [Key/Value Secrets Engine](<https://www.vaultproject.io/docs/secrets/kv/index.html>). This supports some addition features beyond the Version 1 that was the default in earlier Vault builds (e.g. secret rotation, soft deletes, etc).

Unfortunately, K/V V2 introduces some breaking changes, in terms of both request/response payloads as well as how URL's are constructed for Vault's REST API. Therefore, version `4.0.0` of this Vault Driver likewise had to introduce some breaking changes, to allow support for both K/V versions.

\* \*\*If you are using the new K/V V2 across the board\*\*, then no action is needed. The Vault Driver now assumes this by default.

\* \*\*If you are still using the old K/V V1 across the board\*\*, then you can use the `\Vault`` class constructor:  
`\public Vault(final VaultConfig vaultConfig, final Integer engineVersion)``, supplying a ``1`` as the engine version parameter.

constructor, then you can declare whether to use Version 1 or 2 across the board.

\* \*\*If you are using a mix, of some secret paths mounted with V1 and others mounted with V2\*\*, then you have two options:

\* You can explicitly specify your Vault secret paths, and which K/V version each one is using. Construct your `\Vault`` objects

with the constructor `\public Vault(final VaultConfig vaultConfig, final Boolean useSecretsEnginePathMap, final Integer globalFallbackVersion)``.

Within the `\VaultConfig`` object, supply a map of Vault secret paths to their associated K/V version (``1`` or ``2``).

\* You can rely on the Vault Driver to auto-detect your mounts and K/V versions upon instantiation. Use the same constructor as above,

but leave the map `\null``. Note that this option requires your authentication credentials to have access to read Vault's `\v1/sys/mounts`` path.

Version 2 of the K/V engine dynamically injects a qualifier element into your secret paths, which varies depending on the type of for read and write operations, in between the root version operation. For example, for read and write operations, the secret path:

```
```v1/mysecret```
```

... has a "data" qualifier injected:

```
```v1/data/mysecret```
```

The default behavior of this driver is to insert the appropriate qualifier one level deep (i.e. in between the root version number and the rest of the path). However, if your secret path is prefixed, such that the qualifier should be injected further down:

```
```v1/my/long/prefix/data/anything/else```
```

... then you should accordingly set the `\VaultConfig.prefixPathDepth`` property when constructing your `\Vault`` instance.

## SSL Config

-----

If your Vault server uses a SSL certificate, then you must supply that certificate to establish connections. Also, if you are using certificate-based client authentication, then you must supply a client certificate and private key that have been previously registered with your Vault server.

SSL configuration has been broken off from the `\VaultConfig`` class, and placed in its own `\SslConfig`` class. This

class likewise using a builder pattern.

#### #### General Options

...

`.verify(false)` // Defaults to "VAULT\_SSL\_VERIFY" environment variable (or else "true")

...

To disable SSL certificate verification altogether, set `sslVerify(false)`. **YOU SHOULD NOT DO THIS IS A REAL PRODUCTION SETTING!** However, it can be useful in a development or testing server context. If this value is explicitly set to `false`, then all other SSL config is basically unused.

#### #### Java Keystore (JKS) based config

You can provide the driver with a JKS truststore, containing Vault's server-side certificate for basic SSL, using one of the following three options:

`.trustStore(object)` - Supply an in-memory `java.security.KeyStore` file, containing Vault server cert(s) that can be trusted.

`.trustStoreFile(path)` - Same as the above, but the path references a JKS file on the filesystem.

`.trustStoreResource(path)` - Same as the above, but the path references a classpath resource rather than a filesystem path (e.g. if you've bundled the JKS file into your application's JAR, WAR, or EAR file).

If you are only using basic SSL, then no keystore need be provided. However, if you would like to use Vault's TLS Certificate auth backend for client side auth, then you need to provide a JKS keystore containing your client-side certificate and private key:

`.keyStore(object, password)` - Supply an in-memory `java.security.KeyStore` file containing a client certificate and private key, and the password needed to access it (can be null). can be trusted.

`.keyStoreFile(path, password)` - Same as the above, but the path references a JKS file on the filesystem.

`.keyStoreResource(path, password)` - Same as the above, but the path references a classpath resource rather than a filesystem path (e.g. if you've bundled the JKS file into your application's JAR, WAR, or EAR file).

NOTE: JKS-based config trumps PEM-based config (see below). If for some reason you build an `SslConfig` object with both JKS and PEM data present, then only the JKS data will be used. You cannot "mix-and-match", providing a JKS-based truststore and PEM-based client auth data.

#### #### OpenSSL (PEM) based config

To supply Vault's server-side certificate for basic SSL, you can use one of the following three options:

``.pemFile(path)`` - Supply the path to an X.509 certificate in unencrypted PEM format, using UTF-8 encoding (defaults to "VAULT\_SSL\_CERT" environment variable).

``.pemResource(path)`` - Same as above, but the path references a classpath resource rather than a filesystem path (e.g. if you've bundled the PEM file into your applications's JAR, WAR, or EAR file).

``.pemUTF8(contents)`` - The string contents extracted from the PEM file. For Java to parse the certificate properly, there must be a line-break in between the certificate header and body (see the ``.SslConfig`` Javadocs for more detail).

If SSL verification is enabled, no JKS-based config is provided, AND none of these three methods are called, then ``.SslConfig`` will by default check for a ``.VAULT_SSL_CERT`` environment variable. If that's setw then it will be treated as a filesystem path.

To use Vault's TLS Certificate auth backend for SSL client auth, you must provide your client certificate and private key, using some pair from the following options:

``.clientPemUTF8(path)`` - Supply the path to an X.509 certificate in unencrypted PEM format, using UTF-8 encoding.

``.clientPemResource(path)`` - Same as above, but the path references a classpath resource rather than a filesystem path (e.g. if you've bundled the PEM file into your applications's JAR, WAR, or EAR file).

``.clientPemUTF8(contents)`` - The string contents extracted from the PEM file. For Java to parse the certificate properly, there must be a line-break in between the certificate header and body (see the ``.SslConfig`` Javadocs for more detail).

``.clientKeyPemUTF8(path)`` - Supply the path to an RSA private key in unencrypted PEM format, using UTF-8 encoding.

``.clientKeyPemResource(path)`` - Same as above, but the path references a classpath resource rather than a filesystem path (e.g. if you've bundled the PEM file into your applications's JAR, WAR, or EAR file).

``.clientKeyPemUTF8(contents)`` - The string contents extracted from the PEM file. For Java to parse the certificate properly, there must be a line-break in between the certificate header and body (see the ``.SslConfig`` Javadocs for more detail).

## Using the Driver

-----

Like the `VaultConfig` class, `Vault` too supports a builder pattern DSL style:

```
...

final Map<String, String> secrets = new HashMap<String, String>();
secrets.put("value", "world");
secrets.put("other_value", "You can store multiple name/value pairs under a single key");

// Write operation
final LogicalResponse writeResponse = vault.logical()
    .write("secret/hello", secrets);

...

// Read operation
final String value = vault.logical()
    .read("secret/hello")
    .getData().get("value");
...

```

`Vault` has a number of methods for accessing the classes that implement the various endpoints of Vault's HTTP API:

- \* `logical()`: Contains core operations such as reading and writing secrets.
- \* `auth()`: Exposes methods for working with Vault's various auth backends (e.g. to programmatically retrieve a token by authenticating with a username and password).
- \* `pki()`: Operations on the PKI backend (e.g. create and delete roles, issue certificate credentials).
- \* `debug()`: Health check endpoints.

The driver DSL also allows you to specify retry logic, by chaining the `withRetries()` ahead of accessing the endpoint implementation:

```
...

// Retry up to 5 times if failures occur, waiting 1000 milliseconds in between each retry attempt.
final LogicalResponse response = vault.withRetries(5, 1000)
    .logical()
    .read("secret/hello");
...

```

## API Reference (Javadocs)

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Full [Javadoc documentation](<http://bettercloud.github.io/vault-java-driver/javadoc/>).

## Version History

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Note that changes to the major version (i.e. the first number) represent possible breaking changes, and may require modifications in your code to migrate. Changes to the minor version (i.e. the second number) should represent non-breaking changes. The third number represents any very minor bugfix patches.

**\*\*5.1.0\*\***: This release contains the following updates:

- \* Supports path prefixes when using K/V engine V2. [(PR #189)](<https://github.com/BetterCloud/vault-java-driver/pull/189>)
- \* Fixes issues with bulk requests in the transit API. [(PR #195)](<https://github.com/BetterCloud/vault-java-driver/pull/195>)
- \* Adds response body to exception for Auth failures. [(PR #198)](<https://github.com/BetterCloud/vault-java-driver/pull/198>)
- \* Support all options for the createToken operation. [(PR #199)](<https://github.com/BetterCloud/vault-java-driver/pull/199>)

**\*\*5.0.0\*\***: This release contains the following updates:

- \* Changes the retry behavior, to no longer attempt retries on 4xx response codes (for which retries generally won't succeed anyway). This is the only (mildly) breaking change in this release, necessitating a major version bump. [(PR #176)](<https://github.com/BetterCloud/vault-java-driver/pull/176>)
- \* Implements support for the Database secret engine. [(PR #175)](<https://github.com/BetterCloud/vault-java-driver/pull/175>)
- \* Makes the "x-vault-token" header optional, to allow use of Vault Agent. [(PR #184)](<https://github.com/BetterCloud/vault-java-driver/pull/184>)
- \* Removes stray uses of `System.out.println` in favor of `java.util.logging`. [(PR #178)](<https://github.com/BetterCloud/vault-java-driver/pull/178>)
- \* Adds the enum constant `MountType.KEY_VALUE_V2`. [(PR #182)](<https://github.com/BetterCloud/vault-java-driver/pull/182>)

**\*\*4.1.0\*\***: This release contains the following updates:

- \* Support for JWT authentication, for use by Kubernetes and other JWT-based authentication providers. [(PR #164)](<https://github.com/BetterCloud/vault-java-driver/pull/164>)
- \* Updates the lease revoke method, to support changes in the underlying Vault API. [(PR #163)](<https://github.com/BetterCloud/vault-java-driver/pull/163>)
- \* Changes the `VaultConfig.secretsEnginePathMap(...)` method from default access level to `public`, to allow for manual setting [(PR #164)](<https://github.com/BetterCloud/vault-java-driver/pull/156>)
- \* Adds the nonce value to `AuthResponse`, to facilitate re-authentication with Vault via AWS. [(PR #168)](<https://github.com/BetterCloud/vault-java-driver/pull/168>)
- \* Establishes a `module-info` file, updates the JDK requirement for building this library to Java 9 (although the built library artifact remains compatible as a dependency in Java 8 projects). [(PR #165)](<https://github.com/BetterCloud/vault-java-driver/pull/165>)
- \* Updates Gradle, and various test dependencies to their latest versions. Integration tests now target Vault 1.1.3.

**\*\*4.0.0\*\***: This is a breaking-change release, with two primary updates:

- \* Adds support for Version 2 of the Key/Value Secrets Engine. The driver now assumes that your Vault instance uses Version 2 of the

Key/Value Secrets Engine across the board. To configure this, see the [Key/Value Secret Engine Config](#key-value-secret-engine-config)

section above.

- \* Adds support for the namespaces feature of Vault Enterprise.
  
- \* \*\*3.1.0\*\*:

  - \* Adds support for seal-related operations (i.e. `/sys/seal`, `/sys/unseal`, `/sys/seal-status`).
  - \* Adds support for the AWS auth backend.
  - \* Adds support for the Google Cloud Platform auth backend.
  - \* Adds support for the LDAP auth Backend.
  - \* Allows auth backend methods to be configured for non-default mount points.
  - \* Adds "revoke-self" capability for auth tokens.
  - \* Adds support for response-wrapping token validation
  - \* Support for signing a new certificate based on a CSR (i.e. the `/v1/pki/sign` endpoint).
  - \* Support for the PKI backend revoke method, and addition of a `useCsrSans` property in PKI role object
  - \* Gives `VaultConfig` the ability to disable loading from environment variables if desired.
  - \* Cleans up issues with the new Docker-based integration test suite.
  - \* Updates all dependencies to their latest versions (including switching to Vault 0.9.1 for integration testing).

  
- \* \*\*3.0.0\*\*:

  - \* This is a breaking-change release, with several updates.
  - \* \*\*API changes\*\*:
    - \* Adds support for writing arbitrary objects to Vault, instead of just strings (i.e. the `com.bettercloud.vault.api.Logical.write(...)` method now accepts a `Map<String, Object>` rather than a `Map<String, String>`).
    - \* Refactors the `VaultConfig` class, forcing use of the builder pattern and breaking off SSL-related config into a separate `SslConfig` class.
    - \* Refactors the `Auth.createToken()` method, to encapsulate the possible options within a config object rather than having the method signature contain 8 optional arguments.
  - \* \*\*SSL and Auth Backend support\*\*:
    - \* Adds support for authenticating with the TLS Certificate auth backend.
    - \* Updates SSL support in general, allowing users to configure the driver with Java-friendly JKS keystore and truststore files (in addition to continuing to support Vault-friendly PEM format).
    - \* Implements the `/v1/auth/token/lookup-self` endpoint.
    - \* Supports creating tokens against a role.
  - \* \*\*Major re-vamp of the integration test suite\*\*:
    - \* The tests now use the [TestContainers](https://www.testcontainers.org/) library to setup and launch a Vault server instance from within a Docker container, in a completely automated manner. You no longer have to manually configure and run a Vault server to use the test suite!
    - \* The tests are now going against a regular Vault server, rather than one running in "dev mode". Therefore, they are now able to use HTTPS connections rather than plain HTTP.
    - \* Upgrades tests to use Java 8 (although the library itself still targets Java 7).
  - \* \*\*Misc / quality-of-life\*\*:
    - \* Includes the REST response body in `VaultException` messages for basic read and write operations.
    - \* Makes numerous classes implement `Serializable`.
    - \* Upgrades the project to Gradle 4.0.

  
- \* \*\*2.0.0\*\*:

  - \* This is breaking-change release, with numerous deprecated items cleaned up.

- \* Adds support for authentication via the AppRole auth backend.
  - \* Adds support for renewing secret leases.
  - \* Removes the `com.bettercloud.vault.api.Sys` class, deprecated in the 1.2.0 release.
  - \* Removes the `com.bettercloud.vault.api.Auth.loginByUsernamePassword` method, deprecated in the 1.2.0 release.
  - \* Removes the fields `leaseId`, `leaseDuration`, and `renewable` from the `VaultResponse` base class, instead including them only in the subclasses for specific response types where they are found.
  - \* Changes the `com.bettercloud.vault.response.AuthResponse` class field `authLeaseDuration` from type `int` to `long`.
  - \* Refactors and removes various deprecated `private` methods, with no change to the exposed API.
- 1.2.0**: This is a substantial release, with numerous additions. It's a minor version number only because there should be no breaking changes. The changes include the following:
- \* Switches from Vault 0.5.x to 0.6.x for automated tests.
  - \* Adds a field to `VaultException` for capturing the HTTP response code (if any) from Vault.
  - \* Updates the Gradle build, so that you no longer need empty placeholder values for certain variables elsewhere in your environment.
  - \* Updates integration test suite to account for breaking changes in Vault 0.6.x (e.g. you can no longer use a token that was obtained from one of the authentication backends to perform tasks such as creating and deleting roles, etc).
  - \* Deprecates the App ID authentication backend, and adds a new version of the Userpass authentication backend that doesn't require a path prefix. Adds support for the GitHub authentication backend.
  - \* If the `VAULT_TOKEN` environment parameter is not set, then the driver will now check for a file named `.vault-token` in the executing user's home directory, and try to read a token value from that.
  - \* Deprecates the `com.bettercloud.vault.api.Sys` class, moving the debug-related methods into their own specific `com.bettercloud.vault.api.Debug` class instead.
  - \* Implements some of the lease related endpoints (i.e. `revoke`, `revoke-prefix`, `revoke-force`).
  - \* Supports PKI backends that are mounted on non-default paths.
- 1.1.1**: Changes the `ttl` argument to `Pki.issue()` from `Integer` to `String`, to fix a bug preventing you from specifying the time suffix (e.g. "1h").
- 1.1.0**: Switches from Vault 0.4.x to 0.5.x for automated tests. Adds support to the Logical API wrapper for listing and deleting secrets. Implements the `/v1/sys/health` health-check HTTP API endpoint. Implements portions of the PKI backend (e.g. creating and deleting roles, issuing credentials). Marks numerous methods as deprecated, to be removed in a future major release.
- 1.0.0**: Drops support for Java 6. Removes all methods marked as `@Deprecated` in version 0.5.0. Adds support for response metadata (i.e. `lease_id`, `renewable`, `lease_duration`) to all response types, rather than just `AuthResponse`. Changes `leaseDuration` type from `int` to `Long` in `AuthResponse`. Removes `final` declarations on all classes (outside of the JSON package). Various bugfixes. Adds support for auth token self-renewal. Adds support for writing values that return content.
- 0.5.0**: Adds support for supplying SSL certificates, and for toggling whether or not the Vault server's SSL certificate will be verified. Also adds support for `openTimeout` and `readTimeout` settings. Deprecates the `timeout`, `sslTimeout`, `proxyAddress`, `proxyPort`, `proxyUsername`, and `proxyPassword` settings (the proxy settings may return in a future version, but it's too misleading to have methods exposed for settings that won't really be supported soon).

\* \*\*0.3.0\*\*\*: Initial public release. Support for writing and reading secrets, authenticating with the "AppID" or "Username & Password" auth backends. All over-the-wire methods support automatic retry logic.

## Development

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Pull requests are welcomed for bugfixes or enhancements that do not alter the external facing class and method signatures. For any breaking changes that would alter the contract provided by this driver, please open up an issue to discuss it first.

All code changes should include unit test and/or integration test coverage as appropriate. Unit tests are any that can be run in isolation, with no external dependencies. Integration tests are those which require a Vault server instance (at least a Dev Server) up and running.

Unit tests are located under the `src/test` directory, and can be run with the Gradle `unitTest` task.

Integration tests are located under the `src/test-integration` directory, and can be run with the Gradle `integrationTest` task. See the additional `README.md` file in this directory for more detailed information.

Although this library now includes a `module-info` class for use by Java 9+, the library currently targets Java 8 compatibility. Please do not attempt to introduce any features or syntax not compatible with Java 8 (the Gradle build script should prevent you from doing so without modification).

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## Other Notes

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The Vault server system itself is a product of HashiCorp, a completely separate organization.

This client driver adapts JSON parsing code from Ralf Sternberg's excellent [minimal-json](https://github.com/ralfstx/minimal-json) library, likewise available under the MIT License. Package names have all been changed, to prevent any conflicts should you happen to be using a different version of that library elsewhere in your project dependencies.

Found in path(s):

\* /opt/cola/permits/1162863465\_1653505868.969204/0/vault-java-driver-master-1-zip/vault-java-driver-master/README.md

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/\*\*

\* <p>Intended for internal use by other classes within the Vault driver library.</p>

\*

\* <p>JSON parsing functionality. The classes in this package are adapted from Ralf Sternberg's excellent

\* <a href="https://github.com/ralfstx/minimal-json">"minimal-json"</a> library, available under the MIT License.

\* The package names have all been changed, to prevent any conflicts should you happen to be using a different

\* version of this library elsewhere in your project dependencies.</p>

\*/

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## 1.281 jakarta-expression-language-3.0-api

### 5.0.0-RC1

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\* Project home: <https://projects.eclipse.org/projects/ee4j.el>

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\* <https://github.com/eclipse-ee4j/el-ri>

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# 1.284 byte-buddy-agent 1.9.10

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## 1.285 fabric8-::-kubernetes-model-::-rbac

### 4.10.3

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## 1.293 micronaut-test 3.1.1

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```

Found in path(s):

```
* /opt/cola/permits/1331474237_1653506865.917328/0/micronaut-test-junit5-3-1-1-sources-jar/io/micronaut/test/extensions/junit5/annotation/MicronautTest.java  
* /opt/cola/permits/1331474237_1653506865.917328/0/micronaut-test-junit5-3-1-1-sources-jar/io/micronaut/test/extensions/junit5/MicronautJunit5Extension.java  
* /opt/cola/permits/1331474237_1653506865.917328/0/micronaut-test-junit5-3-1-1-sources-jar/io/micronaut/test/extensions/junit5/graal/MicronautJUnit5Gaal.java
```

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```
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/launch_stage.proto
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```
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/label.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/postal_address.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/datetime.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/source_info.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/quaternion.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/field_behavior.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/latlng.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/httpbody.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/money.proto  
* /opt/cola/permits/1337069512_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/logging/type/http_request.proto
```

\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/calendar\_period.proto  
\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/rpc/code.proto  
\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/geo/type/viewport.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/system\_parameter.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/documentation.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/date.proto  
\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/logging.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/distribution.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/usage.proto

\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/auth.proto  
\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/type/expr.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/annotations.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/monitoring.proto  
\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/resource.proto  
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\* /opt/cola/permits/1337069512\_1654218326.7907567/0/proto-google-common-protos-2-0-1-1-jar/google/api/monitored\_resource.proto

# 1.295 scala-java8-compat\_2.12 0.9.1

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# 1.296 junit-jupiter-junit-jupiter-engine 5.8.2

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# 1.297 jboss-logging 3.3.2.Final

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    </plugin>
  </plugins>
</build>
</project>

```

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\* /opt/cola/permits/1341640010\_1654785818.176366/0/kafka-avro-serializer-5-5-5-jar/META-INF/maven/io.confluent/kafka-avro-serializer/pom.xml

## 1.299 dropwizard-logging-support 2.0.28

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# 1.301 fabric8-::-kubernetes-model-::-apps

## 4.10.3

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# 1.303 metrics-health-checks 4.1.11

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Manifest-Version: 1.0

Build-Jdk-Spec: 1.8

Bundle-Description: An addition to Metrics which provides the ability to run application-specific health checks, allowing you to check your application's health in production.

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Bundle-ManifestVersion: 2

Bundle-Name: Metrics Health Checks

Bundle-SymbolicName: io.dropwizard.metrics.healthchecks

Bundle-Version: 4.1.11

Created-By: Apache Maven Bundle Plugin

Export-Package: com.codahale.metrics.health;uses:="com.codahale.metrics";version="4.1.11",com.codahale.metrics.health.annotation;version="4.1.11",com.codahale.metrics.health.jvm;uses:="com.codahale.metrics.health,com.codahale.metrics.jvm";version="4.1.11"

Implementation-Title: Metrics Health Checks

Implementation-Version: 4.1.11

Import-Package: com.codahale.metrics;resolution:=optional;version="[4.1,5)",com.codahale.metrics.health,com.codahale.metrics.health.annotation,com.codahale.metrics.jvm;resolution:=optional;version="[4.1,5)",org.slf4j;version="[1.6.0,2.0.0)"

Private-Package: com.codahale.metrics.health,com.codahale.metrics.health.annotation,com.codahale.metrics.health.jvm

Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"

Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1341130506\_1654768535.3386562/0/metrics-healthchecks-4-1-11-5-jar/META-INF/MANIFEST.MF

# 1.304 wire-protocol-buffer-runtime 3.7.0

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# 1.305 micronaut-azure 3.2.3

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## 1.306 dropwizard 2.0.28

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```

Found in path(s):

```
* /opt/cola/permits/1341639944_1654785848.7246685/0/jdbi3-jackson2-3-27-2-sources-
jar/org/jdbi/v3/jackson2/JacksonJsonMapper.java
* /opt/cola/permits/1341639944_1654785848.7246685/0/jdbi3-jackson2-3-27-2-sources-
jar/org/jdbi/v3/jackson2/Jackson2Config.java
* /opt/cola/permits/1341639944_1654785848.7246685/0/jdbi3-jackson2-3-27-2-sources-
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```

Found in path(s):

```
* /opt/cola/permits/1341639944_1654785848.7246685/0/jdbi3-jackson2-3-27-2-sources-jar/META-
INF/maven/org.jdbi/jdbi3-jackson2/pom.xml
```

## 1.308 micronaut-email 1.2.1

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Found in path(s):

\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-jar/io/micronaut/email/AsyncEmailSender.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-jar/io/micronaut/email/StringBody.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-jar/io/micronaut/email/validation/RecipientsUtils.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-jar/io/micronaut/email/configuration/FromConfigurationProperties.java  
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jar/io/micronaut/email/Email.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/Contact.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/Body.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/Attachment.java  
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jar/io/micronaut/email/EmailException.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/AbstractTransactionalEmailSender.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/DefaultEmailSender.java  
\* /opt/cola/permits/1331473578\_1653068511.1991618/0/micronaut-email-1-2-1-sources-  
jar/io/micronaut/email/validation/Recipients.java

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## 1.312 jvm-integration-for-metrics 4.0.5

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Manifest-Version: 1.0  
Bnd-LastModified: 1545937890888  
Build-Jdk: 1.8.0\_191  
Built-By: artem  
Bundle-Description: A set of classes which allow you to monitor critical aspects of your Java Virtual Machine using Metrics.  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: JVM Integration for Metrics  
Bundle-SymbolicName: io.dropwizard.metrics.jvm  
Bundle-Version: 4.0.5  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.jvm;uses:="com.codahale.metrics,javax.management";version="4.0.5"  
Implementation-Title: JVM Integration for Metrics  
Implementation-URL: <http://metrics.dropwizard.io/metrics-jvm>  
Implementation-Vendor-Id: io.dropwizard.metrics  
Implementation-Version: 4.0.5  
Import-Package: org.slf4j;version="[1.6.0,2.0.0)",com.sun.management;resolution:=optional,com.codahale.metrics;version="[4.0,5)",javax.management  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-3.3.0.201609221906

Found in path(s):

\* /opt/cola/permits/1274701574\_1648835908.24/0/metrics-jvm-4-0-5-jar/META-INF/MANIFEST.MF

## 1.313 junit-5-bill-of-materials 5.8.2

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```
import java.io.File
import java.net.URI

data class License(val name: String, val url: URI, val headerFile: File)
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# 1.317 open-telemetry/opentelemetry-java

## 1.14.0

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\* /opt/cola/permits/1343419668\_1655584013.3890648/0/opentelemetry-exporter-otlp-common-1-14-0-sources-jar/io/opentelemetry/exporter/internal/grpc/MarshalerInputStream.java

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\* /opt/cola/permits/1343419668\_1655584013.3890648/0/opentelemetry-exporter-otlp-common-1-14-0-sources-jar/io/opentelemetry/exporter/internal/marshal/CodedInputStream.java

\* /opt/cola/permits/1343419668\_1655584013.3890648/0/opentelemetry-exporter-otlp-common-1-14-0-sources-jar/io/opentelemetry/exporter/internal/marshal/WireFormat.java

## 1.318 opentelemetry-java---

# io.opentelemetry:opentelemetry-sdk-metrics

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- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/cache/package-info.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/cache/RedisCacheConfiguration.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/session/RedisHttpSessionConfiguration.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/test/package-info.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/DefaultRedisClientFactory.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/cache/DefaultRedisCacheConfiguration.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/DefaultRedisConfiguration.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/AbstractRedisClientFactory.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/NamedRedisClientFactory.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/cache/SyncCacheCommands.java
- \* /opt/cola/permits/1331473606\_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/io/micronaut/configuration/lettuce/RedisConnectionUtil.java

```
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/session/RedisSessionStore.java
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/DefaultRedisClusterClientFactory.java
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/session/RedisSessionCommands.java
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Found in path(s):

```
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-jar/META-
INF/native-image/io.micronaut.redis/redis-lettuce/native-image.properties
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*/
```

Found in path(s):

```
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/ClientResourcesMutator.java
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/MetricsClientResourceMutator.java
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/ThreadPoolClientResourceMutator.java
* /opt/cola/permits/1331473606_1653513048.6155212/0/micronaut-redis-lettuce-5-2-0-sources-
jar/io/micronaut/configuration/lettuce/health/RedisHealthIndicator.java
```

## 1.324 jackson-databind 2.13.3

## 1.324.1 Available under license :

# Jackson JSON processor

Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers.

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# 1.325 com.helger:profiler 1.1.1

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Found in path(s):

\* /opt/cola/permits/1293853635\_1649177431.36/0/profiler-1-1-1-jar/META-INF/maven/com.helger/profiler/pom.xml

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Manifest-Version: 1.0  
Automatic-Module-Name: com.papertrail.profiler  
Bnd-LastModified: 1563722217801  
Build-Jdk: 1.8.0\_202  
Built-By: philip

Bundle-Description: A pure-java implementation of the twitter/util project's `CpuProfile` and related classes.  
Bundle-DocURL: <http://www.helger.com>  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.txt>  
Bundle-ManifestVersion: 2  
Bundle-Name: com.helger:profiler  
Bundle-SymbolicName: com.helger.profiler  
Bundle-Vendor: Philip Helger  
Bundle-Version: 1.1.1  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.papertrail.profiler;version="1.1.1",com.papertrail.profiler.jaxrs;uses:="javax.ws.rs";version="1.1.1"  
Implementation-Title: com.helger:profiler  
Implementation-URL: <https://github.com/phax/profiler>  
Implementation-Vendor: Philip Helger  
Implementation-Vendor-Id: com.helger  
Implementation-Version: 1.1.1  
Import-Package: com.papertrail.profiler,javax.ws.rs;version="[2.1,3)"  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-4.1.0.201810181252

Found in path(s):

\* /opt/cola/permits/1293853635\_1649177431.36/0/profiler-1-1-1-jar/META-INF/MANIFEST.MF

# 1.326 rxjersey 0.9.0

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# 1.327 hdrhistogram 2.1.12

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Manifest-Version: 1.0

Bnd-LastModified: 1575980548657

Build-Jdk: 1.8.0\_232

Built-By: gil

Bundle-Description: HdrHistogram supports the recording and analyzing sampled data value counts across a configurable integer value range with configurable value precision within the range. Value precision is expressed as the number of significant digits in the value recording, and provides control over value quantization behavior across the value range and the subsequent value resolution at any given level.

Bundle-License: <http://creativecommons.org/publicdomain/zero/1.0/>, <https://opensource.org/licenses/BSD-2-Clause>

Bundle-ManifestVersion: 2

Bundle-Name: HdrHistogram

Bundle-SymbolicName: org.hdrhistogram.HdrHistogram

Bundle-Version: 2.1.12

Created-By: Apache Maven Bundle Plugin

Export-Package: org.HdrHistogram;version="2.1.12",org.HdrHistogram.packagedarray;version="2.1.12"

Implementation-Title: HdrHistogram

Implementation-Vendor-Id: org.hdrhistogram

Implementation-Version: 2.1.12

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.7))"

Specification-Title: HdrHistogram

Specification-Version: 2.1.12

Tool: Bnd-2.3.0.201405100607

Found in path(s):

\* /opt/cola/permits/1185944801\_1628011594.04/0/hdrhistogram-2-1-12-3-jar/META-INF/MANIFEST.MF

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INF/maven/org.hdrhistogram/HdrHistogram/pom.xml

# 1.328 profiler 1.0.2

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site.baseurl}}/../{{ site.latestScalaVersion }}/">Scala {{ site.latestScalaVersion }} spec</a>.</div>  
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not-a-legal-formal-parameter-tuple.scala:2: error: not a legal formal parameter.

Note: Tuples cannot be directly destructured in method or function parameters.

```
Either create a single parameter accepting the Tuple2,  
or consider a pattern matching anonymous function: `{ case (a, b) => ... }  
val x: ((Int, Int) => Int) = (((a, b)) => a)  
      ^
```

not-a-legal-formal-parameter-tuple.scala:3: error: not a legal formal parameter.

Note: Tuples cannot be directly destructured in method or function parameters.

```
Either create a single parameter accepting the Tuple2,  
or consider a pattern matching anonymous function: `{ case (param1, param2) => ... }  
val y: ((Int, Int, Int) => Int) = (((a, !)) => a)  
      ^
```

not-a-legal-formal-parameter-tuple.scala:4: error: not a legal formal parameter.

Note: Tuples cannot be directly destructured in method or function parameters.

```
Either create a single parameter accepting the Tuple3,  
or consider a pattern matching anonymous function: `{ case (param1, ..., param3) => ... }  
val z: ((Int, Int, Int) => Int) = (((a, NotAPatternVariableName, c)) => a)  
      ^
```

three errors found

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# 1.330 jackson-module-scala 2.13.3

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## 1.333 jackson-jaxrs-base 2.13.3

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## 1.334 java-classmate classmate-1.5.1

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Java ClassMate library was originally written by Tatu Saloranta (tatu.saloranta@iki.fi)

Other developers who have contributed code are:

\* Brian Langel

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## 1.335 classgraph 4.8.65

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## 1.336 micronaut-servlet 3.2.2

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\* /opt/cola/permits/1331473542\_1653512935.5710146/0/micronaut-servlet-core-3-2-2-sources-jar/io/micronaut/servlet/http/ServletCookies.java  
\* /opt/cola/permits/1331473542\_1653512935.5710146/0/micronaut-servlet-core-3-2-2-sources-jar/io/micronaut/servlet/http/ServletResponseFactory.java  
\* /opt/cola/permits/1331473542\_1653512935.5710146/0/micronaut-servlet-core-3-2-2-sources-jar/io/micronaut/servlet/http/encoders/StreamFileEncoder.java  
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\* /opt/cola/permits/1331473542\_1653512935.5710146/0/micronaut-servlet-core-3-2-2-sources-jar/io/micronaut/servlet/http/ServletHttpResponse.java  
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\* /opt/cola/permits/1331473542\_1653512935.5710146/0/micronaut-servlet-core-3-2-2-sources-

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# 1.338 zstd-jni 1.4.9-1

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Manifest-Version: 1.0

Automatic-Module-Name: com.github.luben.zstd\_jni

Bnd-LastModified: 1615191527618

Bundle-Description: JNI bindings for Zstd native library that provides fast and high compression lossless algorithm for Java and all JVM languages.

Bundle-License: <https://opensource.org/licenses/BSD-2-Clause>;description=BSD 2-Clause License

Bundle-ManifestVersion: 2

Bundle-Name: zstd-jni

Bundle-NativeCode: aix/ppc64/libzstd-jni.so;osname=AIX;processor=ppc64, darwin/x86\_64/libzstd-jni.dylib;osname=MacOS;osname=MacOSX;processor=x86\_64, darwin/aarch64/libzstd-jni.dylib;osname=MacOS;osname=MacOSX;processor=aarch64, freebsd/amd64/libzstd-jni.so;osname=FreeBSD;processor=amd64, freebsd/i386/libzstd-jni.so;osname=FreeBSD;processor=i386, linux/aarch64/libzstd-jni.so;osname=Linux;processor=aarch64, linux/amd64/libzstd-jni.so;osname=Linux;processor=amd64, linux/arm/libzstd-jni.so;osname=Linux;processor=arm, linux/i386/libzstd-jni.so;osname=Linux;processor=i386, linux/mips64/libzstd-jni.so;osname=Linux;processor=mips64, linux/ppc64/libzstd-jni.so;osname=Linux;processor=ppc64, linux/ppc64le/libzstd-jni.so;osname=Linux;processor=ppc64le, linux/s390x/libzstd-jni.so;osname=Linux;processor=s390x, win/amd64/libzstd-jni.dll;osname=Win32;processor=amd64, win/x86/libzstd-jni.dll;osname=Win32;processor=x86

Bundle-SymbolicName: com.github.luben.zstd-jni

Bundle-Vendor: com.github.luben

Bundle-Version: 1.4.9.1

Created-By: 1.8.0\_275 (Debian)

Export-Package: com.github.luben.zstd;version="1.4.9.1",com.github.luben.zstd.util;version="1.4.9.1"

Implementation-Title: zstd-jni

Implementation-Vendor: com.github.luben

Implementation-Vendor-Id: com.github.luben

Implementation-Version: 1.4.9-1

Import-Package: org.osgi.framework;resolution:=optional

Private-Package: linux.amd64,linux.i386,linux.aarch64,linux.arm,linux.ppc64,linux.ppc64le,linux.mips64,linux.s390x,aix.ppc64,darwin.x86\_64,darwin.aarch64,win.amd64,win.x86,freebsd.amd64,freebsd.i386

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Specification-Title: zstd-jni

Specification-Vendor: com.github.luben

Specification-Version: 1.4.9-1  
Tool: Bnd-4.0.0.201805111645

Found in path(s):

\* /opt/cola/permits/1183892379\_1627494642.79/0/zstd-jni-1-4-9-1-1-jar/META-INF/MANIFEST.MF

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```
{ "version":3,"file":"kotlin.js","sources":["wrapper.js","js/arrayUtils.js","js/callableReferenceUtils.js","js/conversions.js","js/core.js","js/long.js","js/markerFunctions.js","js/misc.js","js/polyfills.js","js/rtti.js","runtime/arrayUtils.kt","runtime/Enum.kt","primitiveCompanionObjects.kt","common/src/generated/_Arrays.kt","common/src/generated/_Ranges.kt","unsigned/src/kotlin/UByte.kt","unsigned/src/kotlin/UInt.kt","unsigned/src/kotlin/UShort.kt","builtin-sources/Ranges.kt","src/kotlin/collections/Collections.kt","src/kotlin/collections/Maps.kt","src/kotlin/collections/Sets.kt","src/kotlin/text/StringNumberConversions.kt","src/kotlin/time/Duration.kt","unsigned/src/kotlin/UnsignedUtils.kt","src/kotlin/collections/Iterables.kt","src/kotlin/collections/Sequences.kt","src/kotlin/util/Preconditions.kt","js/src/generated/_ArraysJs.kt","src/kotlin/comparisons/Comparisons.kt","src/kotlin/util/Standard.kt","js/src/generated/_ComparisonsJs.kt","unsigned/src/kotlin/ULong.kt","common/src/generated/_Collections.kt","js/src/kotlin/collections.kt","src/kotlin/collections/Iterators.kt","common/src/generated/_Comparisons.kt","common/src/generated/_Maps.kt","common/src/generated/_OneToManyTitlecaseMappings.kt","js/src/kotlin/text/char.kt","js/src/kotlin/text/string.kt","src/kotlin/text/Char.kt","src/kotlin/CharCode.kt","common/src/generated/_Sequences.kt","common/src/generated/_Sets.kt","common/src/generated/_Strings.kt","src/kotlin/text/Strings.kt","unsigned/src/kotlin/UByteArray.kt","unsigned/src/kotlin/UIntArray.kt","unsigned/src/kotlin/ULongArray.kt","unsigned/src/kotlin/UShortArray.kt","common/src/generated/_UArrays.kt","common/src/generated/_UCollections.kt","common/src/generated/_UComparisons.kt","common/src/generated/_URanges.kt","common/src/generated/_USequences.kt","common/src/kotlin/ExceptionsH.kt","common/src/kotlin/JsAnnotationsH.kt","common/src/kotlin/ioH.kt","builtin-sources/Collections.kt","builtin-sources/Iterators.kt","builtin-sources/ProgressionIterators.kt","builtin-sources/Progressions.kt","builtin-sources/Range.kt","builtin-sources/Unit.kt","builtin-sources/annotation/Annotations.kt","builtin-sources/internal/InternalAnnotations.kt","builtin-sources/internal/progressionUtil.kt","src/kotlin/builtins.kt","src/kotlin/jsTypeOf.kt","src/kotlin/kotlin.kt","src/kotlin/CharCode_js-v1.kt","src/kotlin/coroutines/CoroutineImpl.kt","src/kotlin/util/Result.kt","src/kotlin/coroutines/Continuation.kt","src/kotlin/coroutines/intrinsics/IntrinsicsJs.kt","src/kotlin/currentBeMisc.kt","src/kotlin/exceptions.kt","src/kotlin/jsOperators.kt","src/kotlin/math_js-v1.kt","src/kotlin/numbers_js-v1.kt","src/kotlin/reflection_js-v1.kt","src/kotlin/text/numberConversions_js-v1.kt","js/src/generated/_CharCategories.kt","js/src/generated/_CollectionsJs.kt","js/src/generated/_DigitChars.kt","js/src/generated/_LetterChars.kt","js/src/generated/_OtherLowercaseChars.kt","js/src/generated/_OtherUppercaseChars.kt","js/src/generated/_StringsJs.kt","js/src/generated/_TitlecaseMappings.kt","js/src/generated/_UArraysJs.kt","js/src/generated/_WhitespaceChars.kt","js/src/kotlin/Comparator.kt","js/src/kotlin/annotations.kt","js/src/kotlin/annotationsJVM.kt","js/src/kotlin/collections/AbstractMutableCollection.kt","js/src/kotlin/collections/AbstractMutableList.kt","js/src/kotlin/collections/AbstractMutableMap.kt","js/src/kotlin/collections/AbstractMutableSet.kt","js/src/kotlin/collections/ArrayList.kt","js/src/kotlin/collections/ArraySorting.kt","js/src/kotlin/collections/ArraysJs.kt","js/src/kotlin/collections/EqualityComparator.kt","js/src/kotlin/collections/HashMap.kt","js/src/kotlin/collections/HashSet.kt","js/src/kotlin/collections/InternalHashCodeMap.kt","js/src/kotlin/collections/InternalMap.kt","js/src/kotlin/collections/InternalStringMap.kt","js/src/kotlin/collections/LinkedHashMap.kt","js/src/kotlin/collections/LinkedHashSet.kt"
```

, "js/src/kotlin/concurrent.kt", "js/src/kotlin/console.kt", "js/src/kotlin/coroutines/SafeContinuationJs.kt", "js/src/kotlin/coroutines/cancellation/CancellationException.kt", "js/src/kotlin/coroutines/js/internal/EmptyContinuation.kt", "js/src/kotlin/date.kt", "js/src/kotlin/dom/Builders.kt", "js/src/kotlin/dom/Classes.kt", "js/src/kotlin/dom/Dom.kt", "js/src/kotlin/dom/EventListener.kt", "js/src/kotlin/dom/ItemArrayLike.kt", "js/src/kotlin/dom/Mutations.kt", "js/src/kotlin/dynamic.kt", "js/src/kotlin/exceptionUtils.kt", "js/src/kotlin/grouping.kt", "src/kotlin/collections/Grouping.kt", "js/src/kotlin/jsOn.kt", "js/src/kotlin/math.kt", "js/src/kotlin/numbers.kt", "js/src/kotlin/promise.kt", "js/src/kotlin/random/PlatformRandom.kt", "js/src/kotlin/reflect/AssociatedObjects.kt", "js/src/kotlin/reflect/JsClass.kt", "js/src/kotlin/reflect/KClassImpl.kt", "js/src/kotlin/reflect/KClassesImpl.kt", "js/src/kotlin/reflect/KTypeHelpers.kt", "js/src/kotlin/reflect/KTypeImpl.kt", 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"js/src/org.w3c/org.w3c.dom.encryptedmedia.kt", "js/src/org.w3c/org.w3c.dom.events.kt", "js/src/org.w3c/org.w3c.dom.kt", "js/src/org.w3c/org.w3c.fetch.kt", "js/src/org.w3c/org.w3c.dom.mediacapture.kt", "js/src/org.w3c/org.w3c.dom.mediasource.kt", "js/src/org.w3c/org.w3c.dom.pointerevents.kt", "js/src/org.w3c/org.w3c.dom.svg.kt", "js/src/org.w3c/org.w3c.files.kt", "js/src/org.w3c/org.w3c.notifications.kt", "js/src/org.w3c/org.w3c.workers.kt", "js/src/org.w3c/org.w3c.xhr.kt", "src/kotlin/annotations/Experimental.kt", "src/kotlin/annotations/ExperimentalStdlibApi.kt", "src/kotlin/annotations/Inference.kt", "src/kotlin/annotations/Multiplatform.kt", "src/kotlin/annotations/OptIn.kt", "src/kotlin/collections/AbstractCollection.kt", "src/kotlin/collections/AbstractIterator.kt", "src/kotlin/collections/AbstractList.kt", "src/kotlin/collections/AbstractMap.kt", "src/kotlin/collections/AbstractSet.kt", "src/kotlin/collections/ArrayDeque.kt", "src/kotlin/collections/Arrays.kt", 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"src/kotlin/random/Random.kt", "src/kotlin/random/URandom.kt", "src/kotlin/random/XorWowRandom.kt", "src/kotlin/ranges/Ranges.kt", "src/kotlin/reflect/KClasses.kt", "src/kotlin/reflect/KTypeProjection.kt", "src/kotlin/reflect/KVariance.kt", "src/kotlin/reflect/typeOf.kt", "src/kotlin/text/Appendable.kt", "src/kotlin/text/Indent.kt", "src/kotlin/text/Typography.kt", "src/kotlin/text/regex/MatchResult.kt", "src/kotlin/time/DurationUnit.kt", "src/kotlin/time/ExperimentalTime.kt", "src/kotlin/time/TimeSource.kt", "src/kotlin/time/TimeSources.kt", "src/kotlin/time/measureTime.kt", "src/kotlin/util/DeepRecursive.kt", "src/kotlin/util/FloorDivMod.kt", "src/kotlin/util/HashCode.kt", "src/kotlin/util/KotlinVersion.kt", "src/kotlin/util/Lateinit.kt", "src/kotlin/util/Lazy.kt", "src/kotlin/util/Numbers.kt", "src/kotlin/util/Suspend.kt", "src/kotlin/util/Tuples.kt", "unsigned/src/kotlin/UIntRange.kt", "unsigned/src/kotlin/UIterators.kt", "unsigned/src/kotlin/ULongRange.kt", "unsigned/src/kotlin/UMath.kt", "unsigned/src/kotlin/UNumbers.kt", "unsigned/src/kotlin/UProgressionUtil.kt", "unsigned/src/kotlin/UStrings.kt", "unsigned/src/kotlin/annotations/Unsigned.kt", "common/src/kotlin/MathH.kt"], "sourcesContent": ["(function (root, factory) {\n if (typeof define === 'function' && define.amd) {\n define('kotlin', ['exports'], factory);\n }\n else if (typeof exports === 'object') {\n factory(module.exports);\n }\n else {\n root.kotlin = {};\n factory(root.kotlin);\n }\n})(this, function (Kotlin) {\n var \_ = Kotlin;\n insertContent();\n});\n", "/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the

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license/LICENSE.txt file.\n */\n\nKotlin.isArray = function (a) {\n  return (Array.isArray(a) || a instanceof
Int8Array) && a.$type$ === \"BooleanArray\"\n};\n\nKotlin.isArray = function (a) {\n  return a instanceof
Int8Array && a.$type$ !== \"BooleanArray\"\n};\n\nKotlin.isShortArray = function (a) {\n  return a instanceof
Int16Array\n};\n\nKotlin.isCharArray = function (a) {\n  return a instanceof Uint16Array && a.$type$ ===
\"CharArray\"\n};\n\nKotlin.isIntArray = function (a) {\n  return a instanceof
Int32Array\n};\n\nKotlin.isFloatArray = function (a) {\n  return a instanceof
Float32Array\n};\n\nKotlin.isDoubleArray = function (a) {\n  return a instanceof
Float64Array\n};\n\nKotlin.isLongArray = function (a) {\n  return Array.isArray(a) && a.$type$ ===
\"LongArray\"\n};\n\nKotlin.isArray = function (a) {\n  return Array.isArray(a) &&
!a.$type$;\n};\n\nKotlin.isArrayish = function (a) {\n  return Array.isArray(a) ||
ArrayBuffer.isView(a)\n};\n\nKotlin.arrayToString = function (a) {\n  if (a === null) return \"null\"\n  var
toString = Kotlin.isCharArray(a) ? String.fromCharCode : Kotlin.toString;\n  return \"[\" +
Array.prototype.map.call(a, function(e) { return toString(e); }).join(\", \") + \"]\"\n};\n\nKotlin.arrayDeepToString
= function (arr) {\n  return Kotlin.kotlin.collections.contentDeepToStringImpl(arr);\n};\n\nKotlin.arrayEquals =
function (a, b) {\n  if (a === b) {\n    return true;\n  }\n  if (a === null || b === null || !Kotlin.isArrayish(b) ||
a.length !== b.length) {\n    return false;\n  }\n  for (var i = 0, n = a.length; i < n; i++) {\n    if
(!Kotlin.equals(a[i], b[i])) {\n      return false;\n    }\n  }\n  return true;\n};\n\nKotlin.arrayDeepEquals =
function (a, b) {\n  return Kotlin.kotlin.collections.contentDeepEqualsImpl(a, b);\n};\n\nKotlin.arrayHashCode =
function (arr) {\n  if (arr === null) return 0\n  var result = 1;\n  for (var i = 0, n = arr.length; i < n; i++) {\n
result = ((31 * result | 0) + Kotlin.hashCode(arr[i])) | 0;\n  }\n  return result;\n};\n\nKotlin.arrayDeepHashCode =
function (arr) {\n  return
Kotlin.kotlin.collections.contentDeepHashCodeImpl(arr);\n};\n\nKotlin.primitiveArraySort = function (array) {\n
array.sort(Kotlin.doubleCompareTo)\n};\n\n\"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.getCallableRef = function(name, f) {\n  f.callableName = name;\n  return
f;\n};\n\nKotlin.getPropertyCallableRef = function(name, paramCount, getter, setter) {\n  getter.get = getter;\n
getter.set = setter;\n  getter.callableName = name;\n  return getPropertyRefClass(getter, setter,
propertyRefClassMetadataCache[paramCount]);\n};\n\nfunction getPropertyRefClass(obj, setter, cache) {\n
obj.$metadata$ = getPropertyRefMetadata(typeof setter === \"function\" ? cache.mutable : cache.immutable);\n
obj.constructor = obj;\n  return obj;\n}\n\nvar propertyRefClassMetadataCache = [\n  {\n    mutable: { value:
null, implementedInterface: function () {\n      return Kotlin.kotlin.reflect.KMutableProperty0 }\n    },\n
immutable: { value: null, implementedInterface: function () {\n      return Kotlin.kotlin.reflect.KProperty0 }\n
}\n  },\n  {\n    mutable: { value: null, implementedInterface: function () {\n      return
Kotlin.kotlin.reflect.KMutableProperty1 }\n    },\n    immutable: { value: null, implementedInterface: function
() {\n      return Kotlin.kotlin.reflect.KProperty1 }\n    }\n  }\n];\n\nfunction getPropertyRefMetadata(cache)
{\n  if (cache.value === null) {\n    cache.value = {\n      interfaces: [cache.implementedInterface()],\n
baseClass: null,\n      functions: {},\n      properties: {},\n      types: {},\n      staticMembers: {}\n
};\n  }\n  return cache.value;\n}\n\n\"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.toShort = function (a) {\n  return (a & 0xFFFF) << 16 >>
16;\n};\n\nKotlin.toByte = function (a) {\n  return (a & 0xFF) << 24 >> 24;\n};\n\nKotlin.toChar = function (a) {\n
return a & 0xFFFF;\n};\n\nKotlin.numberToLong = function (a) {\n  return a instanceof Kotlin.Long ? a :
Kotlin.Long.fromNumber(a);\n};\n\nKotlin.numberToInt = function (a) {\n  return a instanceof Kotlin.Long ?
a.toInt() : Kotlin.doubleToInt(a);\n};\n\nKotlin.numberToShort = function (a) {\n  return
Kotlin.toShort(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToByte = function (a) {\n  return
Kotlin.toByte(Kotlin.numberToInt(a));\n};\n\nKotlin.numberToDouble = function (a) {\n  return
+a;\n};\n\nKotlin.numberToChar = function (a) {\n  return
Kotlin.toChar(Kotlin.numberToInt(a));\n};\n\nKotlin.doubleToInt = function(a) {\n  if (a > 2147483647) return

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2147483647;\n  if (a < -2147483648) return -2147483648;\n  return a | 0;\n};\n\nKotlin.toBoxedChar = function
(a) {\n  if (a == null) return a;\n  if (a instanceof Kotlin.BoxedChar) return a;\n  return new
Kotlin.BoxedChar(a);\n};\n\nKotlin.unboxChar = function(a) {\n  if (a == null) return a;\n  return
Kotlin.toChar(a);\n};\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\nKotlin.equals = function (obj1, obj2) {\n  if (obj1 == null) {\n    return obj2 ==
null;\n  }\n  if (obj2 == null) {\n    return false;\n  }\n  if (obj1 !== obj2) {\n    return obj2 !== obj2;\n
}\n  if (typeof obj1 === "object" && typeof obj1.equals === "function") {\n    return obj1.equals(obj2);\n
}\n  if (typeof obj1 === "number" && typeof obj2 === "number") {\n    return obj1 === obj2 && (obj1 !==
0 || 1 / obj1 === 1 / obj2);\n  }\n  return obj1 === obj2;\n};\n\nKotlin.hashCode = function (obj) {\n  if (obj ==
null) {\n    return 0;\n  }\n  var objType = typeof obj;\n  if ("object" === objType) {\n    return "function"
=== typeof obj.hashCode ? obj.hashCode() : getObjectHashCode(obj);\n  }\n  if ("function" === objType) {\n
    return getObjectHashCode(obj);\n  }\n  if ("number" === objType) {\n    return
Kotlin.numberHashCode(obj);\n  }\n  if ("boolean" === objType) {\n    return Number(obj)\n  }\n  var str
= String(obj);\n  return getStringHashCode(str);\n};\n\nKotlin.toString = function (o) {\n  if (o == null) {\n
return "null";\n  }\n  else if (Kotlin.isArrayish(o)) {\n    return "["+o+"]";\n  }\n  else {\n    return
o.toString();\n  }\n};\n\n/** @const *\nvar POW_2_32 = 4294967296;\n// TODO: consider switching to Symbol
type once we are on ES6.\n/** @const *\nvar OBJECT_HASH_CODE_PROPERTY_NAME =
"__kotlinHashCodeValue$";\n\nfunction getObjectHashCode(obj) {\n  if
(! (OBJECT_HASH_CODE_PROPERTY_NAME in obj)) {\n    var hash = (Math.random() * POW_2_32) | 0;\n    // Keep
32-bit signed integer.\n    Object.defineProperty(obj, OBJECT_HASH_CODE_PROPERTY_NAME, {\n      value: hash,
enumerable: false });\n  }\n  return
obj[OBJECT_HASH_CODE_PROPERTY_NAME];\n}\n\nfunction getStringHashCode(str) {\n  var hash = 0;\n  for (var i = 0; i < str.length; i++) {\n    var code = str.charCodeAt(i);\n    hash = (hash * 31 + code) | 0;\n    // Keep
it 32-bit.\n  }\n  return hash;\n}\n\nKotlin.identityHashCode = getObjectHashCode;\n"/*\n * Copyright 2010-
2018 JetBrains s.r.o. and Kotlin Programming Language contributors. \n * Use of this source code is governed by
the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// Copyright 2009 The Closure
Library Authors. All Rights Reserved.\n// Licensed under the Apache License, Version 2.0 (the "License");\n//
you may not use this file except in compliance with the License.\n// You may obtain a copy of the License at\n//
http://www.apache.org/licenses/LICENSE-2.0\n// Unless required by applicable law or agreed to in writing,
software\n// distributed under the License is distributed on an "AS-IS" BASIS,\n// WITHOUT WARRANTIES OR
CONDITIONS OF ANY KIND, either express or implied.\n\n/**\n * Constructs a 64-bit two's-complement integer,
given its low and high 32-bit\n * values as *signed* integers. See the from* functions below for more\n *
convenient ways of constructing Longs.\n * \n * The internal representation of a long is the two given signed, 32-bit
values.\n * \n * We use 32-bit pieces because these are the size of integers on which\n * Javascript performs bit-
operations. For operations like addition and\n * multiplication, we split each number into 16-bit pieces, which can
easily be\n * multiplied within Javascript's floating-point representation without overflow\n * or change in sign.\n
*\n * \n * In the algorithms below, we frequently reduce the negative case to the\n * positive case by negating the
input(s) and then post-processing the result.\n * \n * Note that we must ALWAYS check specially whether those values
are MIN_VALUE\n * (-2^63) because -MIN_VALUE == MIN_VALUE (since 2^63 cannot be represented as\n * a
positive number, it overflows back into a negative). Not handling this\n * case would often result in infinite
recursion.\n * \n * @param {number} low The low (signed) 32 bits of the long.\n * @param {number} high The
high (signed) 32 bits of the long.\n * @constructor\n * @final\n */\n\nKotlin.Long = function(low, high) {\n  /**\n
 * @type {number}\n * @private\n */\n  this.low_ = low | 0; // force into 32 signed bits.\n\n  /**\n
 * @type {number}\n * @private\n */\n  this.high_ = high | 0; // force into 32 signed bits.\n};\n\nKotlin.Long.$metadata$ =
{\n  kind: "class",\n  simpleName: "Long",\n  interfaces: []\n};\n\n// NOTE: Common constant values
ZERO, ONE, NEG_ONE, etc. are defined below the\n// from* methods on which they depend.\n\n/**\n * A cache
of the Long representations of small integer values.\n * @type {!Object}\n * @private\n */\n\nKotlin.Long.IntCache_

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```

= {};
}

/**
 * Returns a Long representing the given (32-bit) integer value.
 * @param {number} value The 32-bit integer in question.
 * @return {!Kotlin.Long} The corresponding Long value.
 */
Kotlin.Long.fromInt = function(value) {
    if (-128 <= value && value < 128) {
        var cachedObj = Kotlin.Long.IntCache_[value];
        if (cachedObj) {
            return cachedObj;
        }
        var obj = new Kotlin.Long(value | 0, value < 0 ? -1 : 0);
        if (-128 <= value && value < 128) {
            Kotlin.Long.IntCache_[value] = obj;
        }
        return obj;
    };
}

/**
 * Converts this number value to `Long`.
 * The fractional part, if any, is rounded down towards zero.
 * Returns zero if this `Double` value is `NaN`, `Long.MIN_VALUE` if it's less than `Long.MIN_VALUE`,
 * `Long.MAX_VALUE` if it's bigger than `Long.MAX_VALUE`.
 * @param {number} value The number in question.
 * @return {!Kotlin.Long} The corresponding Long value.
 */
Kotlin.Long.fromNumber = function(value) {
    if (isNaN(value)) {
        return Kotlin.Long.ZERO;
    } else if (value <= -Kotlin.Long.TWO_PWR_63_DBL_) {
        return Kotlin.Long.MIN_VALUE;
    } else if (value + 1 >= Kotlin.Long.TWO_PWR_63_DBL_) {
        return Kotlin.Long.MAX_VALUE;
    } else if (value < 0) {
        return Kotlin.Long.fromNumber(-value).negate();
    } else {
        return new Kotlin.Long(
            (value % Kotlin.Long.TWO_PWR_32_DBL_) | 0,
            (value / Kotlin.Long.TWO_PWR_32_DBL_) | 0);
    }
};

/**
 * Returns a Long representing the 64-bit integer that comes by concatenating
 * the given high and low bits. Each is assumed to use 32 bits.
 * @param {number} lowBits The low 32-bits.
 * @param {number} highBits The high 32-bits.
 * @return {!Kotlin.Long} The corresponding Long value.
 */
Kotlin.Long.fromBits = function(lowBits, highBits) {
    return new Kotlin.Long(lowBits, highBits);
};

/**
 * Returns a Long representation of the given string, written using the given
 * radix.
 * @param {string} str The textual representation of the Long.
 * @param {number=} opt_radix The radix in which the text is written.
 * @return {!Kotlin.Long} The corresponding Long value.
 */
Kotlin.Long.fromString = function(str, opt_radix) {
    if (str.length == 0) {
        throw Error('number format error: empty string');
    }
    var radix = opt_radix || 10;
    if (radix < 2 || 36 < radix) {
        throw Error('radix out of range: ' + radix);
    }
    if (str.charAt(0) == '-') {
        return Kotlin.Long.fromString(str.substring(1), radix).negate();
    } else if (str.indexOf('-') >= 0) {
        throw Error('number format error: interior "-" character: ' + str);
    }
    // Do several (8) digits each time through the loop, so as to
    // minimize the calls to the very expensive emulated div.
    var radixToPower = Kotlin.Long.fromNumber(Math.pow(radix, 8));
    var result = Kotlin.Long.ZERO;
    for (var i = 0; i < str.length; i += 8) {
        var size = Math.min(8, str.length - i);
        var value = parseInt(str.substring(i, i + size), radix);
        if (size < 8) {
            var power = Kotlin.Long.fromNumber(Math.pow(radix, size));
            result = result.multiply(power).add(Kotlin.Long.fromNumber(value));
        } else {
            result = result.multiply(radixToPower).add(Kotlin.Long.fromNumber(value));
        }
    }
    return result;
};

// NOTE: the compiler should inline these constant values below and then remove
// these variables, so there should be no runtime penalty for these.
/**
 * Number used repeated below in calculations.
 * This must appear before the first call to any from* function below.
 */
private const TWO_PWR_16_DBL_ = 1 << 16;
private const TWO_PWR_24_DBL_ = 1 << 24;
private const TWO_PWR_32_DBL_ = Kotlin.Long.TWO_PWR_16_DBL_ *
    Kotlin.Long.TWO_PWR_16_DBL_;
private const TWO_PWR_31_DBL_ = Kotlin.Long.TWO_PWR_32_DBL_ / 2;
private const TWO_PWR_48_DBL_ = Kotlin.Long.TWO_PWR_32_DBL_ *
    Kotlin.Long.TWO_PWR_16_DBL_;
private const TWO_PWR_64_DBL_ = Kotlin.Long.TWO_PWR_32_DBL_ *
    Kotlin.Long.TWO_PWR_32_DBL_;
private const TWO_PWR_63_DBL_ = Kotlin.Long.TWO_PWR_64_DBL_ / 2;
private const ZERO = Kotlin.Long.fromInt(0);
private const ONE = Kotlin.Long.fromInt(1);
private const NEG_ONE = Kotlin.Long.fromInt(-1);
private const MAX_VALUE = Kotlin.Long.fromBits(0xFFFFFFFF | 0, 0x7FFFFFFF | 0);

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*\nKotlin.Long.MIN_VALUE = Kotlin.Long.fromBits(0, 0x80000000 | 0);\n\n/**\n * @type {!Kotlin.Long}\n * @private\n */\nKotlin.Long.TWO_PWR_24_ = Kotlin.Long.fromInt(1 << 24);\n\n/**\n * @return {number} The value, assuming it is a 32-bit integer. *\nKotlin.Long.prototype.toInt = function() {\n  return this.low_;\n};\n\n/**\n * @return {number} The closest floating-point representation to this value. *\nKotlin.Long.prototype.toNumber = function() {\n  return this.high_ * Kotlin.Long.TWO_PWR_32_DBL_ +\n  this.getLowBitsUnsigned();\n};\n\n/**\n * @return {number} The 32-bit hashCode of this value. *\nKotlin.Long.prototype.hashCode = function() {\n  return this.high_ ^ this.low_;\n};\n\n/**\n * @param {number=} opt_radix The radix in which the text should be written.\n * @return {string} The textual representation of this value.\n * @override\n */\nKotlin.Long.prototype.toString = function(opt_radix) {\n  var radix = opt_radix || 10;\n  if (radix < 2 || 36 < radix) {\n    throw Error('radix out of range: ' + radix);\n  }\n  if (this.isZero()) {\n    return '0';\n  }\n  if (this.isNegative()) {\n    if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n      // We need to change the Long value before it can be negated, so we remove\n      // the bottom-most digit in this base and then recurse to do the rest.\n      var radixLong = Kotlin.Long.fromNumber(radix);\n      var div = this.div(radixLong);\n      var rem = div.multiply(radixLong).subtract(this);\n      return div.toString(radix) + rem.toInt().toString(radix);\n    } else {\n      return '-' + this.negate().toString(radix);\n    }\n  }\n  // Do several (6) digits each time through the loop, so as to\n  // minimize the calls to the very expensive emulated div.\n  var radixToPower = Kotlin.Long.fromNumber(Math.pow(radix, 6));\n  var rem = this;\n  var result = '';\n  while (true) {\n    var remDiv = rem.div(radixToPower);\n    var intVal = rem.subtract(remDiv.multiply(radixToPower)).toInt();\n    var digits = intVal.toString(radix);\n    rem = remDiv;\n    if (rem.isZero()) {\n      return digits + result;\n    } else {\n      while (digits.length < 6) {\n        digits = '0' + digits;\n      }\n      result = '' + digits + result;\n    }\n  }\n};\n\n/**\n * @return {number} The high 32-bits as a signed value. *\nKotlin.Long.prototype.getHighBits = function() {\n  return this.high_;\n};\n\n/**\n * @return {number} The low 32-bits as a signed value. *\nKotlin.Long.prototype.getLowBits = function() {\n  return this.low_;\n};\n\n/**\n * @return {number} The low 32-bits as an unsigned value. *\nKotlin.Long.prototype.getLowBitsUnsigned = function() {\n  return (this.low_ >= 0) ?\n    this.low_ : Kotlin.Long.TWO_PWR_32_DBL_ + this.low_;\n};\n\n/**\n * @return {number} Returns the number of bits needed to represent the absolute\n * value of this Long.\n */\nKotlin.Long.prototype.getNumBitsAbs = function() {\n  if (this.isNegative()) {\n    if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n      return 64;\n    } else {\n      return this.negate().getNumBitsAbs();\n    }\n  } else {\n    var val = this.high_ != 0 ? this.high_ : this.low_;\n    for (var bit = 31; bit > 0; bit--) {\n      if ((val & (1 << bit)) != 0) {\n        break;\n      }\n    }\n    return this.high_ != 0 ? bit + 33 : bit + 1;\n  }\n};\n\n/**\n * @return {boolean} Whether this value is zero. *\nKotlin.Long.prototype.isZero = function() {\n  return this.high_ == 0 && this.low_ == 0;\n};\n\n/**\n * @return {boolean} Whether this value is negative. *\nKotlin.Long.prototype.isNegative = function() {\n  return this.high_ < 0;\n};\n\n/**\n * @return {boolean} Whether this value is odd. *\nKotlin.Long.prototype.isOdd = function() {\n  return (this.low_ & 1) == 1;\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long equals the other.\n */\nKotlin.Long.prototype.equalsLong = function(other) {\n  return (this.high_ == other.high_) && (this.low_ == other.low_);\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long does not equal the other.\n */\nKotlin.Long.prototype.notEqualsLong = function(other) {\n  return (this.high_ != other.high_) || (this.low_ != other.low_);\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is less than the other.\n */\nKotlin.Long.prototype.lessThan = function(other) {\n  return this.compare(other) < 0;\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is less than or equal to the other.\n */\nKotlin.Long.prototype.lessThanOrEqual = function(other) {\n  return this.compare(other) <= 0;\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is greater than the other.\n */\nKotlin.Long.prototype.greaterThan = function(other) {\n  return this.compare(other) > 0;\n};\n\n/**\n * @param {Kotlin.Long} other Long to compare against.\n * @return {boolean} Whether this Long is greater than or equal to the other.\n */\nKotlin.Long.prototype.greaterThanOrEqual = function(other) {\n  return

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this.compare(other) >= 0;\n};\n\n\n/**\n * Compares this Long with the given one.\n * @param {Kotlin.Long}
other Long to compare against.\n * @return {number} 0 if they are the same, 1 if the this is greater, and -1\n *
the given one is greater.\n */\nKotlin.Long.prototype.compare = function(other) {\n if (this.equalsLong(other)) {\n
return 0;\n }\n\n var thisNeg = this.isNegative();\n var otherNeg = other.isNegative();\n if (thisNeg &&
!otherNeg) {\n return -1;\n }\n if (!thisNeg && otherNeg) {\n return 1;\n }\n\n // at this point, the signs are the
same, so subtraction will not overflow\n if (this.subtract(other).isNegative()) {\n return -1;\n } else {\n return
1;\n }\n};\n\n\n/**\n * @return {!Kotlin.Long} The negation of this value. *\nKotlin.Long.prototype.negate =
function() {\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.MIN_VALUE;\n } else
{\n return this.not().add(Kotlin.Long.ONE);\n }\n};\n\n\n\n/**\n * Returns the sum of this and the given Long.\n *
@param {Kotlin.Long} other Long to add to this one.\n * @return {!Kotlin.Long} The sum of this and the given
Long.\n */\nKotlin.Long.prototype.add = function(other) {\n // Divide each number into 4 chunks of 16 bits, and
then sum the chunks.\n\n var a48 = this.high_ >>> 16;\n var a32 = this.high_ & 0xFFFF;\n var a16 = this.low_
>>> 16;\n var a00 = this.low_ & 0xFFFF;\n\n var b48 = other.high_ >>> 16;\n var b32 = other.high_ & 0xFFFF;\n
var b16 = other.low_ >>> 16;\n var b00 = other.low_ & 0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00 = 0;\n c00
+= a00 + b00;\n c16 += c00 >>> 16;\n c00 &= 0xFFFF;\n c16 += a16 + b16;\n c32 += c16 >>> 16;\n c16 &=
0xFFFF;\n c32 += a32 + b32;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c48 += a48 + b48;\n c48 &=
0xFFFF;\n return Kotlin.Long.fromBits((c16 << 16) | c00, (c48 << 16) | c32);\n};\n\n\n\n/**\n * Returns the
difference of this and the given Long.\n * @param {Kotlin.Long} other Long to subtract from this.\n * @return
{!Kotlin.Long} The difference of this and the given Long.\n */\nKotlin.Long.prototype.subtract = function(other)
{\n return this.add(other.negate());\n};\n\n\n\n/**\n * Returns the product of this and the given long.\n * @param
{Kotlin.Long} other Long to multiply with this.\n * @return {!Kotlin.Long} The product of this and the other.\n
*/\nKotlin.Long.prototype.multiply = function(other) {\n if (this.isZero()) {\n return Kotlin.Long.ZERO;\n } else
if (other.isZero()) {\n return Kotlin.Long.ZERO;\n }\n\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n
return other.isOdd() ? Kotlin.Long.MIN_VALUE : Kotlin.Long.ZERO;\n } else if
(other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return this.isOdd() ? Kotlin.Long.MIN_VALUE :
Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n if (other.isNegative()) {\n return
this.negate().multiply(other.negate());\n } else {\n return this.negate().multiply(other).negate();\n }\n } else if
(other.isNegative()) {\n return this.multiply(other.negate()).negate();\n }\n\n // If both longs are small, use float
multiplication\n if (this.lessThan(Kotlin.Long.TWO_PWR_24_) &&\n
other.lessThan(Kotlin.Long.TWO_PWR_24_)) {\n return Kotlin.Long.fromNumber(this.toNumber() *
other.toNumber());\n }\n\n // Divide each long into 4 chunks of 16 bits, and then add up 4x4 products.\n // We can
skip products that would overflow.\n\n var a48 = this.high_ >>> 16;\n var a32 = this.high_ & 0xFFFF;\n var a16 =
this.low_ >>> 16;\n var a00 = this.low_ & 0xFFFF;\n\n var b48 = other.high_ >>> 16;\n var b32 = other.high_ &
0xFFFF;\n var b16 = other.low_ >>> 16;\n var b00 = other.low_ & 0xFFFF;\n\n var c48 = 0, c32 = 0, c16 = 0, c00
= 0;\n c00 += a00 * b00;\n c16 += c00 >>> 16;\n c00 &= 0xFFFF;\n c16 += a16 * b00;\n c32 += c16 >>> 16;\n
c16 &= 0xFFFF;\n c16 += a00 * b16;\n c32 += c16 >>> 16;\n c16 &= 0xFFFF;\n c32 += a32 * b00;\n c48 +=
c32 >>> 16;\n c32 &= 0xFFFF;\n c32 += a16 * b16;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c32 += a00 *
b32;\n c48 += c32 >>> 16;\n c32 &= 0xFFFF;\n c48 += a48 * b00 + a32 * b16 + a16 * b32 + a00 * b48;\n c48
&= 0xFFFF;\n return Kotlin.Long.fromBits((c16 << 16) | c00, (c48 << 16) | c32);\n};\n\n\n\n\n/**\n * Returns this
Long divided by the given one.\n * @param {Kotlin.Long} other Long by which to divide.\n * @return
{!Kotlin.Long} This Long divided by the given one.\n */\nKotlin.Long.prototype.div = function(other) {\n if
(other.isZero()) {\n throw Error('division by zero');\n } else if (this.isZero()) {\n return Kotlin.Long.ZERO;\n
}\n\n if (this.equalsLong(Kotlin.Long.MIN_VALUE)) {\n if (other.equalsLong(Kotlin.Long.ONE) ||\n
other.equalsLong(Kotlin.Long.NEG_ONE)) {\n return Kotlin.Long.MIN_VALUE; // recall that -MIN_VALUE
== MIN_VALUE\n } else if (other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n return Kotlin.Long.ONE;\n
}\n } else {\n // At this point, we have |other| >= 2, so |this/other| < |MIN_VALUE|.\n var halfThis =
this.shiftRight(1);\n var approx = halfThis.div(other).shiftLeft(1);\n if
(approx.equalsLong(Kotlin.Long.ZERO)) {\n return other.isNegative() ? Kotlin.Long.ONE :

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Kotlin.Long.NEG_ONE;\n    } else {\n        var rem = this.subtract(other.multiply(approx));\n        var result =
approx.add(rem.div(other));\n        return result;\n    }\n    }\n } else if
(other.equalsLong(Kotlin.Long.MIN_VALUE)) {\n    return Kotlin.Long.ZERO;\n }\n\n if (this.isNegative()) {\n
if (other.isNegative()) {\n    return this.negate().div(other.negate());\n } else {\n    return
this.negate().div(other.negate());\n }\n } else if (other.isNegative()) {\n    return
this.div(other.negate()).negate();\n }\n\n // Repeat the following until the remainder is less than other: find a\n //
floating-point that approximates remainder / other *from below*, add this\n // into the result, and subtract it from
the remainder. It is critical that\n // the approximate value is less than or equal to the real value so that the\n //
remainder never becomes negative.\n    var res = Kotlin.Long.ZERO;\n    var rem = this;\n    while
(rem.greaterThanOrEqual(other)) {\n        // Approximate the result of division. This may be a little greater or\n //
smaller than the actual value.\n        var approx = Math.max(1, Math.floor(rem.toNumber() / other.toNumber()));\n\n
// We will tweak the approximate result by changing it in the 48-th digit or\n // the smallest non-fractional digit,
whichever is larger.\n        var log2 = Math.ceil(Math.log(approx) / Math.LN2);\n        var delta = (log2 <= 48) ? 1 :
Math.pow(2, log2 - 48);\n\n        // Decrease the approximation until it is smaller than the remainder. Note\n // that if
it is too large, the product overflows and is negative.\n        var approxRes = Kotlin.Long.fromNumber(approx);\n        var
approxRem = approxRes.multiply(other);\n        while (approxRem.isNegative() || approxRem.greaterThan(rem))
{\n            approx -= delta;\n            approxRes = Kotlin.Long.fromNumber(approx);\n            approxRem =
approxRes.multiply(other);\n        }\n\n        // We know the answer can't be zero... and actually, zero would cause\n //
infinite recursion since we would make no progress.\n        if (approxRes.isZero()) {\n            approxRes =
Kotlin.Long.ONE;\n        }\n\n        res = res.add(approxRes);\n        rem = rem.subtract(approxRem);\n    }\n    return
res;\n};\n\n\n/**\n * Returns this Long modulo the given one.\n * @param {Kotlin.Long} other Long by which to
mod.\n * @return {!Kotlin.Long} This Long modulo the given one.\n */\nKotlin.Long.prototype.modulo =
function(other) {\n    return this.subtract(this.div(other).multiply(other));\n};\n\n\n/**\n * @return {!Kotlin.Long} The
bitwise-NOT of this value. */\nKotlin.Long.prototype.not = function() {\n    return Kotlin.Long.fromBits(~this.low_,
~this.high_);\n};\n\n\n/**\n * Returns the bitwise-AND of this Long and the given one.\n * @param {Kotlin.Long}
other The Long with which to AND.\n * @return {!Kotlin.Long} The bitwise-AND of this and the other.\n */\n
Kotlin.Long.prototype.and = function(other) {\n    return Kotlin.Long.fromBits(this.low_ & other.low_,\n
this.high_ & other.high_);\n};\n\n\n/**\n * Returns the bitwise-OR of this Long and the given one.\n *
@param {Kotlin.Long} other The Long with which to OR.\n * @return {!Kotlin.Long} The bitwise-OR of this and
the other.\n */\nKotlin.Long.prototype.or = function(other) {\n    return Kotlin.Long.fromBits(this.low_ |
other.low_,\nthis.high_ | other.high_);\n};\n\n\n/**\n * Returns the bitwise-XOR of this Long
and the given one.\n * @param {Kotlin.Long} other The Long with which to XOR.\n * @return {!Kotlin.Long}
The bitwise-XOR of this and the other.\n */\nKotlin.Long.prototype.xor = function(other) {\n    return
Kotlin.Long.fromBits(this.low_ ^ other.low_,\nthis.high_ ^ other.high_);\n};\n\n\n/**\n * Returns this Long with bits shifted to the left by the given amount.\n * @param {number} numBits The number of
bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the left by the given amount.\n */\n
Kotlin.Long.prototype.shiftLeft = function(numBits) {\n    numBits &= 63;\n    if (numBits == 0) {\n        return
this;\n    } else {\n        var low = this.low_;\n        if (numBits < 32) {\n            var high = this.high_;\n            return
Kotlin.Long.fromBits(\n            low << numBits,\n            (high << numBits) | (low >>> (32 - numBits)));\n        } else
{\n            return Kotlin.Long.fromBits(0, low << (numBits - 32));\n        }\n    }\n};\n\n\n/**\n * Returns this Long with
bits shifted to the right by the given amount.\n * @param {number} numBits The number of bits by which to shift.\n
* @return {!Kotlin.Long} This shifted to the right by the given amount.\n */\nKotlin.Long.prototype.shiftRight =
function(numBits) {\n    numBits &= 63;\n    if (numBits == 0) {\n        return this;\n    } else {\n        var high = this.high_;\n
if (numBits < 32) {\n            var low = this.low_;\n            return Kotlin.Long.fromBits(\n            (low >>> numBits) | (high
<<< (32 - numBits)),\n            high >> numBits);\n        } else {\n            return Kotlin.Long.fromBits(\n            high >>
(numBits - 32),\n            high >= 0 ? 0 : -1);\n        }\n    }\n};\n\n\n/**\n * Returns this Long with bits shifted to the right
by the given amount, with\n * zeros placed into the new leading bits.\n * @param {number} numBits The number
of bits by which to shift.\n * @return {!Kotlin.Long} This shifted to the right by the given amount, with\n * zeros

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placed into the new leading bits.\n *\nKotlin.Long.prototype.shiftRightUnsigned = function(numBits) {\n numBits
&= 63;\n if (numBits == 0) {\n return this;\n } else {\n var high = this.high_;\n if (numBits < 32) {\n var
low = this.low_;\n return Kotlin.Long.fromBits((low >>> numBits) | (high << (32 - numBits)),\n
high >>> numBits);\n } else if (numBits == 32) {\n return Kotlin.Long.fromBits(high, 0);\n } else {\n
return Kotlin.Long.fromBits(high >>> (numBits - 32), 0);\n } }\n};\n\n// Support for
Kotlin\nKotlin.Long.prototype.equals = function (other) {\n return other instanceof Kotlin.Long &&
this.equalsLong(other);\n};\n\nKotlin.Long.prototype.compareTo_11rb$ =
Kotlin.Long.prototype.compare;\n\nKotlin.Long.prototype.inc = function() {\n return
this.add(Kotlin.Long.ONE);\n};\n\nKotlin.Long.prototype.dec = function() {\n return
this.add(Kotlin.Long.NEG_ONE);\n};\n\nKotlin.Long.prototype.valueOf = function() {\n return
this.toNumber();\n};\n\nKotlin.Long.prototype.unaryPlus = function() {\n return
this;\n};\n\nKotlin.Long.prototype.unaryMinus = Kotlin.Long.prototype.negate;\n\nKotlin.Long.prototype.inv =
Kotlin.Long.prototype.not;\n\nKotlin.Long.prototype.rangeTo = function (other) {\n return new
Kotlin.kotlin.ranges.LongRange(this, other);\n};\n\n/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n\n/*\n * @param {string} id\n * @param {Object} declaration\n\n
*\n\nKotlin.defineModule = function (id, declaration) {\n};\n\nKotlin.defineInlineFunction = function(tag, fun) {\n
return fun;\n};\n\nKotlin.wrapFunction = function(fun) {\n var f = function() {\n f = fun();\n return
f.apply(this, arguments);\n }; \n return function() {\n return f.apply(this, arguments);\n
};\n};\n\nKotlin.isTypeOf = function(type) {\n return function (object) {\n return typeof object === type;\n
}\n};\n\nKotlin.isInstanceOf = function (klass) {\n return function (object) {\n return Kotlin.isType(object,
klass);\n };\n};\n\nKotlin.orNull = function (fn) {\n return function (object) {\n return object == null ||
fn(object);\n };\n};\n\nKotlin.andPredicate = function (a, b) {\n return function (object) {\n return a(object)
&& b(object);\n };\n};\n\nKotlin.kotlinModuleMetadata = function (abiVersion, moduleName, data)
{\n};\n\nKotlin.suspendCall = function(value) {\n return value;\n};\n\nKotlin.coroutineResult = function(qualifier)
{\n throwMarkerError();\n};\n\nKotlin.coroutineController = function(qualifier) {\n
throwMarkerError();\n};\n\nKotlin.coroutineReceiver = function(qualifier) {\n
throwMarkerError();\n};\n\nKotlin.setCoroutineResult = function(value, qualifier) {\n
throwMarkerError();\n};\n\nKotlin.getReifiedTypeParameterKType = function(typeParameter) {\n
throwMarkerError();\n};\n\nfunction throwMarkerError() {\n throw new Error(\n "\nThis marker function
should never be called. \n" +\n "\nLooks like compiler did not eliminate it properly. \n" +\n "\nPlease, report
an issue if you caught this exception.\n");\n}\n\nKotlin.getFunctionById = function(id, defaultValue) {\n return
function() {\n return defaultValue;\n };\n};\n\n/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n\nKotlin.compareTo = function (a, b) {\n var typeA = typeof a;\n if
(typeA === "number") {\n if (typeof b === "number") {\n return Kotlin.doubleCompareTo(a, b);\n
}\n return Kotlin.primitiveCompareTo(a, b);\n }\n if (typeA === "string" || typeA === "boolean") {\n
return Kotlin.primitiveCompareTo(a, b);\n }\n return
a.compareTo_11rb$(b);\n};\n\nKotlin.primitiveCompareTo = function (a, b) {\n return a < b ? -1 : a > b ? 1 :
0;\n};\n\nKotlin.doubleCompareTo = function (a, b) {\n if (a < b) return -1;\n if (a > b) return 1;\n\n if (a ===
b) {\n if (a !== 0) return 0;\n\n var ia = 1 / a;\n return ia === 1 / b ? 0 : (ia < 0 ? -1 : 1);\n }\n\n
return a !== a ? (b !== b ? 0 : 1) : -1;\n};\n\nKotlin.charInc = function (value) {\n return
Kotlin.toChar(value+1);\n};\n\nKotlin.charDec = function (value) {\n return Kotlin.toChar(value-
1);\n};\n\nKotlin.imul = Math.imul || imul;\n\nKotlin.imulEmulated = imul;\n\nfunction imul(a, b) {\n return ((a &
0xffff0000) * (b & 0xffff) + (a & 0xffff) * (b | 0)) | 0;\n}\n\n(function() {\n var buf = new ArrayBuffer(8);\n var
bufFloat64 = new Float64Array(buf);\n var bufFloat32 = new Float32Array(buf);\n var bufInt32 = new
Int32Array(buf);\n var lowIndex = 0;\n var highIndex = 1;\n\n bufFloat64[0] = -1; // bff00000_00000000\n if
(bufInt32[lowIndex] !== 0) {\n lowIndex = 1;\n highIndex = 0;\n }\n\n Kotlin.doubleToBits =

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function(value) {\n    return Kotlin.doubleToRawBits(isNaN(value) ? NaN : value);\n    };\n\nKotlin.doubleToRawBits = function(value) {\n    bufFloat64[0] = value;\n    return\nKotlin.Long.fromBits(bufInt32[lowIndex], bufInt32[highIndex]);\n    };\n\nKotlin.doubleFromBits =\nfunction(value) {\n    bufInt32[lowIndex] = value.low_;\n    bufInt32[highIndex] = value.high_;\n    return\nbufFloat64[0];\n    };\n\nKotlin.floatToBits = function(value) {\n    return Kotlin.floatToRawBits(isNaN(value)\n? NaN : value);\n    };\n\nKotlin.floatToRawBits = function(value) {\n    bufFloat32[0] = value;\n    return\nbufInt32[0];\n    };\n\nKotlin.floatFromBits = function(value) {\n    bufInt32[0] = value;\n    return\nbufFloat32[0];\n    };\n\n// returns zero value for number with positive sign bit and non-zero value for number\nwith negative sign bit.\nKotlin.doubleSignBit = function(value) {\n    bufFloat64[0] = value;\n    return\nbufInt32[highIndex] & 0x80000000;\n    };\n\nKotlin.numberHashCode = function(obj) {\n    if ((obj | 0) ===\nobj) {\n        return obj | 0;\n    } else {\n        bufFloat64[0] = obj;\n        return (bufInt32[highIndex]\n* 31 | 0) + bufInt32[lowIndex] | 0;\n    }\n    };\n\nKotlin.ensureNotNull = function(x) {\n    return x != null\n? x : Kotlin.throwNPE();\n};\n\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language\ncontributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\nlicense/LICENSE.txt file.\n */\n\nif (typeof String.prototype.startsWith === "undefined") {\nObject.defineProperty(String.prototype, "startsWith", {\n    value: function (searchString, position) {\nposition = position || 0;\n        return this.lastIndexOf(searchString, position) === position;\n    }\n});\n\nif (typeof String.prototype.endsWith === "undefined") {\n    Object.defineProperty(String.prototype, "endsWith",\n{\n        value: function (searchString, position) {\n            var subjectString = this.toString();\n            if (position\n=== undefined || position > subjectString.length) {\n                position = subjectString.length;\n            }\nposition -= searchString.length;\n            var lastIndex = subjectString.indexOf(searchString, position);\nreturn lastIndex !== -1 && lastIndex === position;\n        }\n    });\n\n// ES6 Math polyfills\nif (typeof Math.sign\n=== "undefined") {\n    Math.sign = function(x) {\n        x = +x; // convert to a number\n        if (x === 0 ||\nisNaN(x)) {\n            return Number(x);\n        }\n        return x > 0 ? 1 : -1;\n    };\n\nif (typeof Math.trunc ===\n"undefined") {\n    Math.trunc = function(x) {\n        if (isNaN(x)) {\n            return NaN;\n        }\n        if (x > 0)\n{\n            return Math.floor(x);\n        }\n        return Math.ceil(x);\n    };\n\n(function() {\n    var epsilon =\n2.220446049250313E-16;\n    var taylor_2_bound = Math.sqrt(epsilon);\n    var taylor_n_bound =\nMath.sqrt(taylor_2_bound);\n    var upper_taylor_2_bound = 1/taylor_2_bound;\n    var upper_taylor_n_bound =\n1/taylor_n_bound;\n\n    if (typeof Math.sinh === "undefined") {\n        Math.sinh = function(x) {\n            if\n(Math.abs(x) < taylor_n_bound) {\n                var result = x;\n                if (Math.abs(x) > taylor_2_bound) {\n                    result += (x * x * x) / 6;\n                }\n                return result;\n            } else {\n                var y =\nMath.exp(x);\n                var y1 = 1 / y;\n                if (!isFinite(y)) return Math.exp(x - Math.LN2);\n                if\n(!isFinite(y1)) return -Math.exp(-x - Math.LN2);\n                return (y - y1) / 2;\n            }\n        }\n\nif\n(typeof Math.cosh === "undefined") {\n        Math.cosh = function(x) {\n            var y = Math.exp(x);\n            var\ny1 = 1 / y;\n            if (!isFinite(y) || !isFinite(y1)) return Math.exp(Math.abs(x) - Math.LN2);\n            return (y +\ny1) / 2;\n        }\n\nif (typeof Math.tanh === "undefined") {\n        Math.tanh = function(x) {\n            if\n(Math.abs(x) < taylor_n_bound) {\n                var result = x;\n                if (Math.abs(x) > taylor_2_bound) {\n                    result -= (x * x * x) / 3;\n                }\n                return result;\n            } else {\n                var a =\nMath.exp(+x), b = Math.exp(-x);\n                return a === Infinity ? 1 : b === Infinity ? -1 : (a - b) / (a + b);\n            }\n        }\n\n// Inverse hyperbolic function implementations derived from boost special math functions,\n// Copyright Eric Ford & Hubert Holin 2001.\n\nif (typeof Math.asinh === "undefined") {\n    var asinh =\nfunction(x) {\n        if (x >= +taylor_n_bound)\n{\n            if (x > upper_taylor_n_bound)\n{\n                if (x > upper_taylor_2_bound)\n{\n                    // approximation by laurent series in\n1/x at 0+ order from -1 to 0\n                    return Math.log(x) + Math.LN2;\n                }\n                else\n{\n                    // approximation by laurent series in 1/x at 0+ order from -1 to 1\n                    return\nMath.log(x * 2 + (1 / (x * 2)));\n                }\n            }\n            else\n{\n                return\nMath.log(x + Math.sqrt(x * x + 1));\n            }\n        }\n        else if (x <= -taylor_n_bound)\n{\n            return\n-asinh(-x);\n        }\n        else\n{\n            // approximation by taylor series in x at 0 up to

```



```

Object.defineProperty(TypedArray.prototype, 'fill', {
    value: Array.prototype.fill
});
if (typeof TypedArray.prototype.slice === "undefined") {
    Object.defineProperty(TypedArray.prototype, 'slice', {
        value: typedArraySlice
    });
}
// Patch apply to work with TypedArrays if needed.
try {
    (function() {}).apply(null, new Int32Array(0))
} catch (e) {
    var apply = Function.prototype.apply;
    Object.defineProperty(Function.prototype, 'apply', {
        value: function(self, array) {
            return apply.call(this, self, [].slice.call(array));
        }
    });
}
// Patch map to work with TypedArrays if needed.
for (var i = 0; i < arrays.length; ++i) {
    var TypedArray = arrays[i];
    if (typeof TypedArray.prototype.map === "undefined") {
        Object.defineProperty(TypedArray.prototype, 'map', {
            value: function(callback, self) {
                return [].slice.call(this).map(callback, self);
            }
        });
    }
}
// Patch sort to work with TypedArrays if needed.
// TODO: consider to remove following function and replace it with `Kotlin.doubleCompareTo` (see misc.js)
var totalOrderComparator = function (a, b) {
    if (a < b) return -1;
    if (a > b) return 1;
    if (a === b) {
        if (a !== 0) return 0;
        var ia = 1 / a;
        return ia === 1 / b ? 0 : (ia < 0 ? -1 : 1);
    }
    return a !== a ? (b !== b ? 0 : 1) : -1;
};
for (var i = 0; i < arrays.length; ++i) {
    var TypedArray = arrays[i];
    if (typeof TypedArray.prototype.sort === "undefined") {
        Object.defineProperty(TypedArray.prototype, 'sort', {
            value: function(compareFunction) {
                return Array.prototype.sort.call(this, compareFunction || totalOrderComparator);
            }
        });
    }
}
)());
"/**
 * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
Kotlin.Kind = {
    CLASS: "class",
    INTERFACE: "interface",
    OBJECT: "object"
};
Kotlin.callGetter = function (thisObject, class, propertyName) {
    var propertyDescriptor = Object.getOwnPropertyDescriptor(class, propertyName);
    if (propertyDescriptor != null && propertyDescriptor.get != null) {
        return propertyDescriptor.get.call(thisObject);
    }
    propertyDescriptor = Object.getOwnPropertyDescriptor(thisObject, propertyName);
    if (propertyDescriptor != null && "value" in propertyDescriptor) {
        return thisObject[propertyName];
    }
    return Kotlin.callGetter(thisObject, Object.getPrototypeOf(class), propertyName);
};
Kotlin.callSetter = function (thisObject, class, propertyName, value) {
    var propertyDescriptor = Object.getOwnPropertyDescriptor(class, propertyName);
    if (propertyDescriptor != null && propertyDescriptor.set != null) {
        propertyDescriptor.set.call(thisObject, value);
        return;
    }
    propertyDescriptor = Object.getOwnPropertyDescriptor(thisObject, propertyName);
    if (propertyDescriptor != null && "value" in propertyDescriptor) {
        thisObject[propertyName] = value;
        return;
    }
    Kotlin.callSetter(thisObject, Object.getPrototypeOf(class), propertyName, value);
};
function isInheritanceFromInterface(ctor, iface) {
    (ctor === iface) return true;
    var metadata = ctor.$metadata$;
    if (metadata != null) {
        var interfaces = metadata.interfaces;
        for (var i = 0; i < interfaces.length; i++) {
            if (isInheritanceFromInterface(interfaces[i], iface)) {
                return true;
            }
        }
    }
    var superPrototype = ctor.prototype != null ? Object.getPrototypeOf(ctor.prototype) : null;
    var superConstructor = superPrototype != null ? superPrototype.constructor : null;
    return superConstructor != null && isInheritanceFromInterface(superConstructor, iface);
}
/**
 * @param {*} object
 * @param {Function|Object} klass
 * @returns {Boolean}
 */
Kotlin.isType = function (object, klass) {
    if (klass === Object) {
        switch (typeof object) {
            case "string":
            case "number":
            case "boolean":
            case "function":
                return true;
            default:
                return object instanceof Object;
        }
    }
    if (object == null || klass == null || (typeof object !== 'object' && typeof object !== 'function')) {
        return false;
    }
    if (typeof klass === "function" && object instanceof klass) {
        return true;
    }
    var proto = Object.getPrototypeOf(klass);
    var constructor = proto != null ? proto.constructor : null;
    if (constructor != null && "$metadata$" in constructor) {
        var metadata = constructor.$metadata$;
        if (metadata.kind === Kotlin.Kind.OBJECT) {
            return object === klass;
        }
    }
    var klassMetadata = klass.$metadata$;
    // In WebKit (JavaScriptCore) for some interfaces from DOM typeof returns "object", nevertheless they can be used in RHS of instanceof
    if (klassMetadata == null)

```

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{\n    return object instanceof class;\n }{\n\n if (classMetadata.kind === Kotlin.Kind.INTERFACE &&
object.constructor != null) {\n    return isInheritanceFromInterface(object.constructor, class);\n }{\n\n return
false;\n};\n\nKotlin.isNumber = function (a) {\n    return typeof a === "number" || a instanceof
Kotlin.Long;\n};\n\nKotlin.isChar = function (value) {\n    return value instanceof
Kotlin.BoxedChar;\n};\n\nKotlin.isComparable = function (value) {\n    var type = typeof value;\n\n    return type
=== "string" ||\n        type === "boolean" ||\n        Kotlin.isNumber(value) ||\n        Kotlin.isType(value,
Kotlin.kotlin.Comparable);\n};\n\nKotlin.isCharSequence = function (value) {\n    return typeof value === "string"
|| Kotlin.isType(value, Kotlin.kotlin.CharSequence);\n};";\n\n/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n// a package is omitted to get declarations directly under the
module\n\n@PublishedApi\n\nexternal fun <T> Array(size: Int): Array<T>\n\n@JsName("newArray")\n\nfun
<T> newArray(size: Int, initialValue: T) = fillArrayVal(Array<T>(size),
initialValue)\n\n@JsName("newArrayF")\n\ninline fun <T> arrayWithFun(size: Int, init: (Int) -> T) =
fillArrayFun(Array<T>(size), init)\n\n@JsName("fillArray")\n\ninline fun <T> fillArrayFun(array: Array<T>, init:
(Int) -> T): Array<T> {\n    for (i in 0..array.size - 1) {\n        array[i] = init(i)\n    }\n    return
array\n}\n\n@JsName("booleanArray")\n\nfun booleanArray(size: Int, init: dynamic): Array<Boolean> {\n    val
result: dynamic = Array<Boolean>(size)\n    result.`$type$` = "BooleanArray"\n    return when (init) {\n        null,
true -> fillArrayVal(result, false)\n        false -> result\n        else -> fillArrayFun<Boolean>(result, init)\n
}\n}\n\n@JsName("booleanArrayF")\n\ninline fun booleanArrayWithFun(size: Int, init: (Int) -> Boolean):
Array<Boolean> = fillArrayFun(booleanArray(size, false),
init)\n\n@JsName("charArray")\n\n@Suppress("UNUSED_PARAMETER")\n\nfun charArray(size: Int, init:
dynamic): Array<Char> {\n    val result = js("new Uint16Array(size)")\n    result.`$type$` = "CharArray"\n    return
when (init) {\n        null, true, false -> result // For consistency\n        else -> fillArrayFun<Char>(result,
init)\n    }\n}\n\n@JsName("charArrayF")\n\ninline fun charArrayWithFun(size: Int, init: (Int) -> Char):
Array<Char> {\n    val array = charArray(size, null)\n    for (i in 0..array.size - 1) {\n
\n        @Suppress("UNUSED_VARIABLE") // used in js block\n        val value = init(i)\n        js("array[i] = value;")\n
\n    }\n    return array\n}\n\n@JsName("untypedCharArrayF")\n\ninline fun untypedCharArrayWithFun(size: Int, init:
(Int) -> Char): Array<Char> {\n    val array = Array<Char>(size)\n    for (i in 0..array.size - 1) {\n
\n        @Suppress("UNUSED_VARIABLE") // used in js block\n        val value = init(i)\n        js("array[i] = value;")\n
\n    }\n    return array\n}\n\n@JsName("longArray")\n\nfun longArray(size: Int, init: dynamic): Array<Long> {\n    val
result: dynamic = Array<Long>(size)\n    result.`$type$` = "LongArray"\n    return when (init) {\n        null, true ->
fillArrayVal(result, 0L)\n        false -> result\n        else -> fillArrayFun<Long>(result, init)\n
}\n}\n\n@JsName("longArrayF")\n\ninline fun longArrayWithFun(size: Int, init: (Int) -> Long): Array<Long> =
fillArrayFun(longArray(size, false), init)\n\nprivate fun <T> fillArrayVal(array: Array<T>, initialValue: T): Array<T>
{\n    for (i in 0..array.size - 1) {\n        array[i] = initialValue\n    }\n    return array\n}";\n\n/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\npublic class
Enum<T> : Enum<T>> : Comparable<Enum<T>> {\n    @JsName("name$") private var _name: String = ""\n\n    @JsName("ordinal$") private var _ordinal: Int = 0\n\n    val name: String\n        get() = _name\n\n    val ordinal:
Int\n        get() = _ordinal\n\n    override fun compareTo(other: Enum<T>) = ordinal.compareTo(other.ordinal)\n\n    override fun equals(other: Any?) = this === other\n\n    override fun hashCode(): Int =
js("Kotlin.identityHashCode")(this)\n\n    override fun toString() = name\n\n    companion object {\n\n    /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.js.internal\n\n@JsName("DoubleCompanionObject")\n\ninternal object DoubleCompanionObject {\n\n    @JsName("MIN_VALUE")\n    const val MIN_VALUE: Double = 4.9E-324\n\n    @JsName("MAX_VALUE")\n    const val MAX_VALUE: Double = 1.7976931348623157E308\n\n    @JsName("POSITIVE_INFINITY")\n    @Suppress("DIVISION_BY_ZERO")\n    const val

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POSITIVE_INFINITY: Double = 1.0 / 0.0\n\n @JsName("NEGATIVE_INFINITY")\n
@Suppress("DIVISION_BY_ZERO")\n const val NEGATIVE_INFINITY: Double = -1.0 / 0.0\n\n
@JsName("NaN")\n @Suppress("DIVISION_BY_ZERO")\n const val NaN: Double = -(0.0 / 0.0)\n\n
@JsName("SIZE_BYTES")\n const val SIZE_BYTES = 8\n\n @JsName("SIZE_BITS")\n const val
SIZE_BITS = 64\n}\n\n@JsName("FloatCompanionObject")\ninternal object FloatCompanionObject {\n
@JsName("MIN_VALUE")\n const val MIN_VALUE: Float = 1.4E-45F\n\n @JsName("MAX_VALUE")\n
const val MAX_VALUE: Float = 3.4028235E38F\n\n @JsName("POSITIVE_INFINITY")\n
@Suppress("DIVISION_BY_ZERO")\n const val POSITIVE_INFINITY: Float = 1.0F / 0.0F\n\n
@JsName("NEGATIVE_INFINITY")\n @Suppress("DIVISION_BY_ZERO")\n const val
NEGATIVE_INFINITY: Float = -1.0F / 0.0F\n\n @JsName("NaN")\n
@Suppress("DIVISION_BY_ZERO")\n const val NaN: Float = -(0.0F / 0.0F)\n\n
@JsName("SIZE_BYTES")\n const val SIZE_BYTES = 4\n\n @JsName("SIZE_BITS")\n const val
SIZE_BITS = 32\n}\n\n@JsName("IntCompanionObject")\ninternal object IntCompanionObject {\n
@JsName("MIN_VALUE")\n val MIN_VALUE: Int = -2147483647 - 1\n\n @JsName("MAX_VALUE")\n
val MAX_VALUE: Int = 2147483647\n\n @JsName("SIZE_BYTES")\n const val SIZE_BYTES = 4\n\n
@JsName("SIZE_BITS")\n const val SIZE_BITS = 32\n}\n\n@JsName("LongCompanionObject")\ninternal
object LongCompanionObject {\n @JsName("MIN_VALUE")\n val MIN_VALUE: Long =
js("Kotlin.Long.MIN_VALUE")\n\n @JsName("MAX_VALUE")\n val MAX_VALUE: Long =
js("Kotlin.Long.MAX_VALUE")\n\n @JsName("SIZE_BYTES")\n const val SIZE_BYTES = 8\n\n
@JsName("SIZE_BITS")\n const val SIZE_BITS = 64\n}\n\n@JsName("ShortCompanionObject")\ninternal
object ShortCompanionObject {\n @JsName("MIN_VALUE")\n val MIN_VALUE: Short = -32768\n\n
@JsName("MAX_VALUE")\n val MAX_VALUE: Short = 32767\n\n @JsName("SIZE_BYTES")\n const
val SIZE_BYTES = 2\n\n @JsName("SIZE_BITS")\n const val SIZE_BITS =
16\n}\n\n@JsName("ByteCompanionObject")\ninternal object ByteCompanionObject {\n
@JsName("MIN_VALUE")\n val MIN_VALUE: Byte = -128\n\n @JsName("MAX_VALUE")\n val
MAX_VALUE: Byte = 127\n\n @JsName("SIZE_BYTES")\n const val SIZE_BYTES = 1\n\n
@JsName("SIZE_BITS")\n const val SIZE_BITS = 8\n}\n\n@JsName("CharCompanionObject")\ninternal
object CharCompanionObject {\n @JsName("MIN_VALUE")\n public const val MIN_VALUE: Char =
"\u0000"\n\n @JsName("MAX_VALUE")\n public const val MAX_VALUE: Char = "\uFFFF"\n\n
@JsName("MIN_HIGH_SURROGATE")\n public const val MIN_HIGH_SURROGATE: Char = "\uD800"\n\n
@JsName("MAX_HIGH_SURROGATE")\n public const val MAX_HIGH_SURROGATE: Char =
"\uDBFF"\n\n @JsName("MIN_LOW_SURROGATE")\n public const val MIN_LOW_SURROGATE: Char =
"\uDC00"\n\n @JsName("MAX_LOW_SURROGATE")\n public const val MAX_LOW_SURROGATE: Char =
"\uDFFF"\n\n @JsName("MIN_SURROGATE")\n public const val MIN_SURROGATE: Char =
MIN_HIGH_SURROGATE\n\n @JsName("MAX_SURROGATE")\n public const val MAX_SURROGATE:
Char = MAX_LOW_SURROGATE\n\n @JsName("SIZE_BYTES")\n const val SIZE_BYTES = 2\n\n
@JsName("SIZE_BITS")\n const val SIZE_BITS = 16\n}\n\ninternal object StringCompanionObject
{\n}\n\ninternal object BooleanCompanionObject {\n}\n\n", /*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("ArraysKt")\n\npackage
kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n/\n\nimport kotlin.random.*\nimport
kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the
size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior
is unspecified.\n */\n\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component1(): T
{\n return get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1,
throws an [IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n

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*\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component1(): Byte {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component1(): Short {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component1(): Int {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component1(): Long {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component1(): Float {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component1(): Double {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component1(): Boolean {\n    return
get(0)\n}\n\n/**\n * Returns 1st *element* from the array.\n * \n * If the size of this array is less than 1, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component1(): Char {\n    return
get(0)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component2(): T {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component2(): Byte {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component2(): Short {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component2(): Int {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component2(): Long {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component2(): Float {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component2(): Double {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component2(): Boolean {\n    return
get(1)\n}\n\n/**\n * Returns 2nd *element* from the array.\n * \n * If the size of this array is less than 2, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n

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*\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component2(): Char {\n    return
get(1)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component3(): T {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component3(): Byte {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component3(): Short {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component3(): Int {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component3(): Long {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component3(): Float {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component3(): Double {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component3(): Boolean {\n    return
get(2)\n}\n\n/**\n * Returns 3rd *element* from the array.\n * \n * If the size of this array is less than 3, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component3(): Char {\n    return
get(2)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component4(): T {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component4(): Byte {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component4(): Short {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component4(): Int {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component4(): Long {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n
*\n@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component4(): Float {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsExce]ption except in Kotlin/JS\n * where the behavior is unspecified.\n

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*^@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component4(): Double {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component4(): Boolean {\n    return
get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n * If the size of this array is less than 4, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component4(): Char {\n    return
get(3)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun <T> Array<out T>.component5(): T {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun ByteArray.component5(): Byte {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun ShortArray.component5(): Short {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun IntArray.component5(): Int {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun LongArray.component5(): Long {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun FloatArray.component5(): Float {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun DoubleArray.component5(): Double {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun BooleanArray.component5(): Boolean {\n    return
get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n * If the size of this array is less than 5, throws an
[IndexOutOfBoundsException] except in Kotlin/JS\n * where the behavior is unspecified.\n
*^@kotlin.internal.InlineOnly\npublic inline operator fun CharArray.component5(): Char {\n    return
get(4)\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\n\npublic operator fun
<@kotlin.internal.OnlyInputTypes T> Array<out T>.contains(element: T): Boolean {\n    return indexOf(element)
>= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\n\npublic operator fun
ByteArray.contains(element: Byte): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if
[element] is found in the array.\n */\n\npublic operator fun ShortArray.contains(element: Short): Boolean {\n    return
indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\n\npublic operator fun
IntArray.contains(element: Int): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if
[element] is found in the array.\n */\n\npublic operator fun LongArray.contains(element: Long): Boolean {\n    return
indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n */\n\n@Deprecated("The
function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'any { it ==
element }' instead to continue using this behavior, or '.asList().contains(element: T)' to get the same search behavior
as in a list.", ReplaceWith("any { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.6")\n@Suppress("DEPRECATION_ERROR")\npublic operator fun FloatArray.contains(element: Float):
Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n

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*\n@Deprecated("\nThe function has unclear behavior when searching for NaN or zero values and will be removed soon. Use 'any { it == element }' instead to continue using this behavior, or '.asList().contains(element: T)' to get the same search behavior as in a list.", ReplaceWith("any { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")\n@Suppress("DEPRECATION_ERROR")\npublic operator fun DoubleArray.contains(element: Double): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n *\npublic operator fun BooleanArray.contains(element: Boolean): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns `true` if [element] is found in the array.\n *\npublic operator fun CharArray.contains(element: Char): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun <T> Array<out T>.elementAt(index: Int): T\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun ByteArray.elementAt(index: Int): Byte\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun ShortArray.elementAt(index: Int): Short\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun IntArray.elementAt(index: Int): Int\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun LongArray.elementAt(index: Int): Long\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun FloatArray.elementAt(index: Int): Float\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun DoubleArray.elementAt(index: Int): Double\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun BooleanArray.elementAt(index: Int): Boolean\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAt\n *\npublic expect fun CharArray.elementAt(index: Int): Char\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAtOrElse\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAtOrElse\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Byte): Byte {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAtOrElse\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Short): Short {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n *\n\n * @sample samples.collections.Collections.Elements.elementAtOrElse\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Int): Int {\n    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of

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calling the [defaultValue] function if the [index] is out of bounds of this array.\n \* \n \* @sample

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samples.collections.Collections.Elements.elementAtOrElse\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Long): Long {\n    return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Float): Float {\n    return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Double): Double {\n    return if (index >= 0 &&
index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the
result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Boolean): Boolean {\n    return if (index >= 0 &&
index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the
result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {\n    return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the
[index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
<T> Array<out T>.elementAtOrNull(index: Int): T? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.elementAtOrNull(index: Int): Byte? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element
at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.elementAtOrNull(index: Int): Short? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element
at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.elementAtOrNull(index: Int): Int? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element at
the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.elementAtOrNull(index: Int): Long? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element
at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.elementAtOrNull(index: Int): Float? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an element
at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.elementAtOrNull(index: Int): Double? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.elementAtOrNull(index: Int): Boolean? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n *^\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.elementAtOrNull(index: Int): Char? {\n    return this.getOrNull(index)\n}\n\n/**\n * Returns the first
element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample

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`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.find(predicate: (T) -> Boolean): T? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.find(predicate: (Byte) -> Boolean): Byte? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.find(predicate: (Short) -> Boolean): Short? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.find(predicate: (Int) -> Boolean): Int? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.find(predicate: (Long) -> Boolean): Long? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.find(predicate: (Float) -> Boolean): Float? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.find(predicate: (Double) -> Boolean): Double? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.find(predicate: (Boolean) -> Boolean): Boolean? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.find(predicate: (Char) -> Boolean): Char? {\n return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.findLast(predicate: (T) -> Boolean): T? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.findLast(predicate: (Byte) -> Boolean): Byte? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.findLast(predicate: (Short) -> Boolean): Short? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.findLast(predicate: (Int) -> Boolean): Int? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.findLast(predicate: (Long) -> Boolean): Long? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.findLast(predicate: (Float) -> Boolean): Float? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

`samples.collections.Collections.Elements.find` `\n */\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.findLast(predicate: (Double) -> Boolean): Double? {\n return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample`

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samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.findLast(predicate: (Boolean) -> Boolean): Boolean? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.findLast(predicate: (Char) -> Boolean): Char? {\n    return lastOrNull(predicate)\n}\n\n/**\n * Returns
first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun <T> Array<out
T>.first(): T {\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n
*/\npublic fun ByteArray.first(): Byte {\n    if (isEmpty())\n        throw NoSuchElementException("Array is
empty.")\n    return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the
array is empty.\n */\npublic fun ShortArray.first(): Short {\n    if (isEmpty())\n        throw
NoSuchElementException("Array is empty.")\n    return this[0]\n}\n\n/**\n * Returns first element.\n * @throws
[NoSuchElementException] if the array is empty.\n */\npublic fun IntArray.first(): Int {\n    if (isEmpty())\n
throw NoSuchElementException("Array is empty.")\n    return this[0]\n}\n\n/**\n * Returns first element.\n *
@throws [NoSuchElementException] if the array is empty.\n */\npublic fun LongArray.first(): Long {\n    if
(isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return this[0]\n}\n\n/**\n * Returns first
element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun FloatArray.first(): Float
{\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return this[0]\n}\n\n/**\n *
Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n */\npublic fun
DoubleArray.first(): Double {\n    if (isEmpty())\n        throw NoSuchElementException("Array is empty.")\n
return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n
*/\npublic fun BooleanArray.first(): Boolean {\n    if (isEmpty())\n        throw NoSuchElementException("Array is
empty.")\n    return this[0]\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the
array is empty.\n */\npublic fun CharArray.first(): Char {\n    if (isEmpty())\n        throw
NoSuchElementException("Array is empty.")\n    return this[0]\n}\n\n/**\n * Returns the first element matching
the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n */\npublic inline fun
<T> Array<out T>.first(predicate: (T) -> Boolean): T {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n */\npublic inline fun ByteArray.first(predicate: (Byte) -> Boolean): Byte {\n    for (element in
this) if (predicate(element)) return element\n    throw NoSuchElementException("Array contains no element
matching the predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n */\npublic inline fun ShortArray.first(predicate: (Short) -
> Boolean): Short {\n    for (element in this) if (predicate(element)) return element\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first
element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*/\npublic inline fun IntArray.first(predicate: (Int) -> Boolean): Int {\n    for (element in this) if (predicate(element))
return element\n    throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n */\npublic inline fun LongArray.first(predicate: (Long) -
> Boolean): Long {\n    for (element in this) if (predicate(element)) return element\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first
element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*/\npublic inline fun FloatArray.first(predicate: (Float) -> Boolean): Float {\n    for (element in this) if
(predicate(element)) return element\n    throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n */\npublic inline fun DoubleArray.first(predicate:
(Double) -> Boolean): Double {\n    for (element in this) if (predicate(element)) return element\n    throw

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NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first
element matching the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*\npublic inline fun BooleanArray.first(predicate: (Boolean) -> Boolean): Boolean {\n    for (element in this) if
(predicate(element)) return element\n    throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws
[NoSuchElementException] if no such element is found.\n *\npublic inline fun CharArray.first(predicate: (Char) ->
Boolean): Char {\n    for (element in this) if (predicate(element)) return element\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the first
non-null value produced by [transform] function being applied to elements of this array in iteration order,\n * or
throws [NoSuchElementException] if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any> Array<out
T>.firstNotNullOf(transform: (T) -> R?): R {\n    return firstNotNullOfOrNull(transform) ?: throw
NoSuchElementException("No element of the array was transformed to a non-null value.")\n}\n\n/**\n * Returns
the first non-null value produced by [transform] function being applied to elements of this array in iteration order,\n
* or `null` if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any> Array<out
T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n    for (element in this) {\n        val result =
transform(element)\n        if (result != null) {\n            return result\n        }\n    }\n    return null\n}\n\n/**\n *
Returns the first element, or `null` if the array is empty.\n *\npublic fun <T> Array<out T>.firstOrNull(): T? {\n
return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n
*\npublic fun ByteArray.firstOrNull(): Byte? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the
first element, or `null` if the array is empty.\n *\npublic fun ShortArray.firstOrNull(): Short? {\n    return if
(isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun
IntArray.firstOrNull(): Int? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element, or
`null` if the array is empty.\n *\npublic fun LongArray.firstOrNull(): Long? {\n    return if (isEmpty()) null else
this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun
FloatArray.firstOrNull(): Float? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element,
or `null` if the array is empty.\n *\npublic fun DoubleArray.firstOrNull(): Double? {\n    return if (isEmpty()) null
else this[0]\n}\n\n/**\n * Returns the first element, or `null` if the array is empty.\n *\npublic fun
BooleanArray.firstOrNull(): Boolean? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first
element, or `null` if the array is empty.\n *\npublic fun CharArray.firstOrNull(): Char? {\n    return if (isEmpty())
null else this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was not
found.\n *\npublic inline fun <T> Array<out T>.firstOrNull(predicate: (T) -> Boolean): T? {\n    for (element in
this) if (predicate(element)) return element\n    return null\n}\n\n/**\n * Returns the first element matching the given
[predicate], or `null` if element was not found.\n *\npublic inline fun ByteArray.firstOrNull(predicate: (Byte) ->
Boolean): Byte? {\n    for (element in this) if (predicate(element)) return element\n    return null\n}\n\n/**\n *
Returns the first element matching the given [predicate], or `null` if element was not found.\n *\npublic inline fun
ShortArray.firstOrNull(predicate: (Short) -> Boolean): Short? {\n    for (element in this) if (predicate(element))
return element\n    return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if
element was not found.\n *\npublic inline fun IntArray.firstOrNull(predicate: (Int) -> Boolean): Int? {\n    for
(element in this) if (predicate(element)) return element\n    return null\n}\n\n/**\n * Returns the first element
matching the given [predicate], or `null` if element was not found.\n *\npublic inline fun
LongArray.firstOrNull(predicate: (Long) -> Boolean): Long? {\n    for (element in this) if (predicate(element))
return element\n    return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if
element was not found.\n *\npublic inline fun FloatArray.firstOrNull(predicate: (Float) -> Boolean): Float? {\n
for (element in this) if (predicate(element)) return element\n    return null\n}\n\n/**\n * Returns the first element

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return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given
[index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n */\npublic fun LongArray.getOrNull(index: Int): Long? {\n
return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given
[index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n */\npublic fun FloatArray.getOrNull(index: Int): Float? {\n
return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the given
[index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n */\npublic fun DoubleArray.getOrNull(index: Int): Double?
{\n  return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the
given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n */\npublic fun BooleanArray.getOrNull(index: Int): Boolean?
{\n  return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the
given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n */\npublic fun CharArray.getOrNull(index: Int): Char? {\n
return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of [element], or -
1 if the array does not contain element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Array<out
T>.indexOf(element: T): Int {\n  if (element == null) {\n    for (index in indices) {\n      if (this[index] ==
null) {\n        return index\n      }\n    }\n  } else {\n    for (index in indices) {\n      if (element ==
this[index]) {\n        return index\n      }\n    }\n  }\n  return -1\n}\n\n/**\n * Returns first index of
[element], or -1 if the array does not contain element.\n */\npublic fun ByteArray.indexOf(element: Byte): Int {\n
for (index in indices) {\n  if (element == this[index]) {\n    return index\n  }\n }\n  return -
1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun
ShortArray.indexOf(element: Short): Int {\n  for (index in indices) {\n    if (element == this[index]) {\n
return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns first index of [element], or -1 if the array does not
contain element.\n */\npublic fun IntArray.indexOf(element: Int): Int {\n  for (index in indices) {\n    if (element
== this[index]) {\n    return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns first index of [element], or -
1 if the array does not contain element.\n */\npublic fun LongArray.indexOf(element: Long): Int {\n  for (index in
indices) {\n    if (element == this[index]) {\n    return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns
first index of [element], or -1 if the array does not contain element.\n */\n@Deprecated(\n    "The function has unclear
behavior when searching for NaN or zero values and will be removed soon. Use 'indexOfFirst { it == element }'
instead to continue using this behavior, or '.asList().indexOf(element: T)' to get the same search behavior as in a
list.", ReplaceWith("indexOfFirst { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.6")\npublic fun FloatArray.indexOf(element: Float): Int {\n  for (index in indices) {\n    if
(element == this[index]) {\n    return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns first index of
[element], or -1 if the array does not contain element.\n */\n@Deprecated(\n    "The function has unclear behavior when
searching for NaN or zero values and will be removed soon. Use 'indexOfFirst { it == element }' instead to continue
using this behavior, or '.asList().indexOf(element: T)' to get the same search behavior as in a list.",
ReplaceWith("indexOfFirst { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.6")\npublic fun DoubleArray.indexOf(element: Double): Int {\n  for (index in indices) {\n    if (element ==
this[index]) {\n    return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns first index of [element], or -1 if
the array does not contain element.\n */\npublic fun BooleanArray.indexOf(element: Boolean): Int {\n  for (index
in indices) {\n    if (element == this[index]) {\n    return index\n  }\n }\n  return -1\n}\n\n/**\n *
Returns first index of [element], or -1 if the array does not contain element.\n */\npublic fun
CharArray.indexOf(element: Char): Int {\n  for (index in indices) {\n    if (element == this[index]) {\n
return index\n  }\n }\n  return -1\n}\n\n/**\n * Returns index of the first element matching the given
[predicate], or -1 if the array does not contain such element.\n */\npublic inline fun <T> Array<out
T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n  for (index in indices) {\n    if (predicate(this[index])) {\n

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    return index\n    }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given
[predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
ByteArray.indexOfFirst(predicate: (Byte) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
ShortArray.indexOfFirst(predicate: (Short) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
IntArray.indexOfFirst(predicate: (Int) -> Boolean): Int {\n    for (index in indices) {\n        if (predicate(this[index]))
{\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the
given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
LongArray.indexOfFirst(predicate: (Long) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
FloatArray.indexOfFirst(predicate: (Float) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
DoubleArray.indexOfFirst(predicate: (Double) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
BooleanArray.indexOfFirst(predicate: (Boolean) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the first
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
CharArray.indexOfFirst(predicate: (Char) -> Boolean): Int {\n    for (index in indices) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun <T>
Array<out T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
ByteArray.indexOfLast(predicate: (Byte) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
ShortArray.indexOfLast(predicate: (Short) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
IntArray.indexOfLast(predicate: (Int) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
LongArray.indexOfLast(predicate: (Long) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
FloatArray.indexOfLast(predicate: (Float) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
DoubleArray.indexOfLast(predicate: (Double) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if
(predicate(this[index])) {\n            return index\n        }\n    }\n    return -1\n}\n\n/**\n * Returns index of the last
element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun
BooleanArray.indexOfLast(predicate: (Boolean) -> Boolean): Int {\n    for (index in indices.reversed()) {\n        if

```

```

(predicate(this[index])) {\n      return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain such element.\n */\npublic inline fun CharArray.indexOfLast(predicate: (Char) -> Boolean): Int {\n  for (index in indices.reversed()) {\n    if (predicate(this[index])) {\n      return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun <T> Array<out T>.last(): T {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun ByteArray.last(): Byte {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun ShortArray.last(): Short {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun IntArray.last(): Int {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun LongArray.last(): Long {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun FloatArray.last(): Float {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun DoubleArray.last(): Double {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun BooleanArray.last(): Boolean {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the array is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic fun CharArray.last(): Char {\n  if (isEmpty())\n    throw NoSuchElementException("Array is empty.")\n  return this[lastIndex]\n}\n\n/**\n * Returns the last element matching the given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic inline fun <T> Array<out T>.last(predicate: (T) -> Boolean): T {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element)) return element\n  }\n  throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic inline fun ByteArray.last(predicate: (Byte) -> Boolean): Byte {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element)) return element\n  }\n  throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic inline fun ShortArray.last(predicate: (Short) -> Boolean): Short {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element)) return element\n  }\n  throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample samples.collections.Collections.Elements.last\n\npublic inline fun IntArray.last(predicate: (Int) -> Boolean): Int

```

```

{\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element)) return
element\n  }\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n * @throws
NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n */\npublic inline fun LongArray.last(predicate: (Long) -> Boolean):
Long {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element))
return element\n  }\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n * @throws
NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n */\npublic inline fun FloatArray.last(predicate: (Float) -> Boolean):
Float {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element))
return element\n  }\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n * @throws
NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n */\npublic inline fun DoubleArray.last(predicate: (Double) ->
Boolean): Double {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if
(predicate(element)) return element\n  }\n  throw NoSuchElementException("Array contains no element
matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n * @throws
NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n */\npublic inline fun BooleanArray.last(predicate: (Boolean) ->
Boolean): Boolean {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if
(predicate(element)) return element\n  }\n  throw NoSuchElementException("Array contains no element
matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n * @throws
NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n */\npublic inline fun CharArray.last(predicate: (Char) -> Boolean):
Char {\n  for (index in this.indices.reversed()) {\n    val element = this[index]\n    if (predicate(element))
return element\n  }\n  throw NoSuchElementException("Array contains no element matching the
predicate.")\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic
fun <@kotlin.internal.OnlyInputTypes T> Array<out T>.lastIndexOf(element: T): Int {\n  if (element == null) {\n
  for (index in indices.reversed()) {\n    if (this[index] == null) {\n      return index\n    }\n  }\n} else {\n
  for (index in indices.reversed()) {\n    if (element == this[index]) {\n      return index\n    }\n  }\n}
return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain
element.\n */\npublic fun ByteArray.lastIndexOf(element: Byte): Int {\n  for (index in indices.reversed()) {\n    if
(element == this[index]) {\n      return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns last index of
[element], or -1 if the array does not contain element.\n */\npublic fun ShortArray.lastIndexOf(element: Short): Int
{\n  for (index in indices.reversed()) {\n    if (element == this[index]) {\n      return index\n    }\n  }\n}
return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not contain element.\n */\npublic fun
IntArray.lastIndexOf(element: Int): Int {\n  for (index in indices.reversed()) {\n    if (element == this[index]) {\n
  return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns last index of [element], or -1 if the array does not
contain element.\n */\npublic fun LongArray.lastIndexOf(element: Long): Int {\n  for (index in indices.reversed())
{\n    if (element == this[index]) {\n      return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns last
index of [element], or -1 if the array does not contain element.\n */\n@Deprecated("The function has unclear
behavior when searching for NaN or zero values and will be removed soon. Use 'indexOfLast { it == element }'
instead to continue using this behavior, or '.asList().lastIndexOf(element: T)' to get the same search behavior as in a
list.", ReplaceWith("indexOfLast { it == element }"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.6")\npublic fun FloatArray.lastIndexOf(element: Float): Int {\n  for (index in indices.reversed())
{\n    if (element == this[index]) {\n      return index\n    }\n  }\n  return -1\n}\n\n/**\n * Returns last
index of [element], or -1 if the array does not contain element.\n */\n@Deprecated("The function has unclear

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(predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n *\npublic inline fun FloatArray.lastOrNull(predicate: (Float) ->
Boolean): Float? {\n    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if
(predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n *\npublic inline fun DoubleArray.lastOrNull(predicate: (Double) ->
Boolean): Double? {\n    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if
(predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n *\npublic inline fun BooleanArray.lastOrNull(predicate: (Boolean)
-> Boolean): Boolean? {\n    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if
(predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns the last element matching the given
[predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.last\n *\npublic inline fun CharArray.lastOrNull(predicate: (Char) ->
Boolean): Char? {\n    for (index in this.indices.reversed()) {\n        val element = this[index]\n        if
(predicate(element)) return element\n    }\n    return null\n}\n\n/**\n * Returns a random element from this array.\n *
\n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.random(): T {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws
NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun ByteArray.random(): Byte {\n    return random(Random)\n}\n\n/**\n * Returns a random element from
this array.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun ShortArray.random(): Short {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws
NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun IntArray.random(): Int {\n    return random(Random)\n}\n\n/**\n * Returns a random element from this
array.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun LongArray.random(): Long {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws
NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun FloatArray.random(): Float {\n    return random(Random)\n}\n\n/**\n * Returns a random element from
this array.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun DoubleArray.random(): Double {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this array.\n * \n * @throws
NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun BooleanArray.random(): Boolean {\n    return random(Random)\n}\n\n/**\n * Returns a random element
from this array.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun CharArray.random(): Char {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n\npublic
fun <T> Array<out T>.random(random: Random): T {\n    if (isEmpty())\n        throw
NoSuchElementException("Array is empty.")\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random
element from this array using the specified source of randomness.\n * \n * @throws NoSuchElementException if
this array is empty.\n
\n *\n@SinceKotlin("1.3")\n\npublic fun ByteArray.random(random: Random): Byte {\n    if
(isEmpty())\n        throw NoSuchElementException("Array is empty.")\n    return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
\n *\n@SinceKotlin("1.3")\n\npublic

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fun ShortArray.random(random: Random): Short {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array using the specified source of randomness.
 * @throws NoSuchElementException if this array is empty.
 * @SinceKotlin("1.3")
 */
public fun IntArray.random(random: Random): Int {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array using the specified source of randomness.
 * @throws NoSuchElementException if this array is empty.
 * @SinceKotlin("1.3")
 */
public fun LongArray.random(random: Random): Long {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array using the specified source of randomness.
 * @throws NoSuchElementException if this array is empty.
 * @SinceKotlin("1.3")
 */
public fun FloatArray.random(random: Random): Float {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array using the specified source of randomness.
 * @throws NoSuchElementException if this array is empty.
 * @SinceKotlin("1.3")
 */
public fun DoubleArray.random(random: Random): Double {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array using the specified source of randomness.
 * @throws NoSuchElementException if this array is empty.
 * @SinceKotlin("1.3")
 */
public fun BooleanArray.random(random: Random): Boolean {
    if (isEmpty()) throw NoSuchElementException("Array is empty.")
    return get(random.nextInt(size))
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun <T> Array<out T>.randomOrNull(): T? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun ByteArray.randomOrNull(): Byte? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun ShortArray.randomOrNull(): Short? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun IntArray.randomOrNull(): Int? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun LongArray.randomOrNull(): Long? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun FloatArray.randomOrNull(): Float? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun DoubleArray.randomOrNull(): Double? {
    return randomOrNull(Random)
}

/** Returns a random element from this array, or `null` if this array is empty.
 * @SinceKotlin("1.4")
 * @WasExperimental(ExperimentalStdlibApi::class)
 * @kotlin.internal.InlineOnly
 */
public inline fun BooleanArray.randomOrNull(): Boolean? {
    return randomOrNull(Random)
}

```

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*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.randomOrNull(): Char? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <T> Array<out T>.randomOrNull(random: Random): T? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun ByteArray.randomOrNull(random: Random): Byte? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun ShortArray.randomOrNull(random: Random): Short? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun IntArray.randomOrNull(random: Random): Int? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun LongArray.randomOrNull(random: Random): Long? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun FloatArray.randomOrNull(random: Random): Float? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun DoubleArray.randomOrNull(random: Random): Double? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun BooleanArray.randomOrNull(random: Random): Boolean? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of randomness, or `null` if this array is empty.\n */\n*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun CharArray.randomOrNull(random: Random): Char? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n*\npublic fun <T> Array<out T>.single(): T {\n    return when (size) {\n        0 -> throw NoSuchElementException("Array is empty.")\n        1 -> this[0]\n        else -> throw\n        IllegalArgumentException("Array has more than one element.")\n    }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n*\npublic fun ByteArray.single(): Byte {\n    return when (size) {\n        0 -> throw NoSuchElementException("Array is empty.")\n        1 -> this[0]\n        else -> throw IllegalArgumentException("Array has more than one element.")\n    }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one element.\n */\n*\npublic fun ShortArray.single(): Short {\n    return when (size) {\n        0 -> throw NoSuchElementException("Array is empty.")\n        1 -> this[0]\n        else -> throw IllegalArgumentException("Array has more than one element.")\n    }\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or has more than one

```



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the predicate.})\n @Suppress("UNCHECKED_CAST")\n return single as Long}\n\n/**\n * Returns the
single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n */\npublic inline fun FloatArray.single(predicate: (Float) -> Boolean): Float {\n var single: Float? =
null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found) throw
IllegalArgumentException("Array contains more than one matching element.")\n single = element\n
found = true\n }\n }\n if (!found) throw NoSuchElementException("Array contains no element matching
the predicate.})\n @Suppress("UNCHECKED_CAST")\n return single as Float}\n\n/**\n * Returns the
single element matching the given [predicate], or throws exception if there is no or more than one matching
element.\n */\npublic inline fun DoubleArray.single(predicate: (Double) -> Boolean): Double {\n var single:
Double? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if (found)
throw IllegalArgumentException("Array contains more than one matching element.")\n single = element\n
found = true\n }\n }\n if (!found) throw NoSuchElementException("Array contains no element
matching the predicate.})\n @Suppress("UNCHECKED_CAST")\n return single as Double}\n\n/**\n *
Returns the single element matching the given [predicate], or throws exception if there is no or more than one
matching element.\n */\npublic inline fun BooleanArray.single(predicate: (Boolean) -> Boolean): Boolean {\n var
single: Boolean? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n if
(found) throw IllegalArgumentException("Array contains more than one matching element.")\n single =
element\n found = true\n }\n }\n if (!found) throw NoSuchElementException("Array contains no
element matching the predicate.})\n @Suppress("UNCHECKED_CAST")\n return single as
Boolean}\n\n/**\n * Returns the single element matching the given [predicate], or throws exception if there is no
or more than one matching element.\n */\npublic inline fun CharArray.single(predicate: (Char) -> Boolean): Char
{\n var single: Char? = null\n var found = false\n for (element in this) {\n if (predicate(element)) {\n
if (found) throw IllegalArgumentException("Array contains more than one matching element.")\n single =
element\n found = true\n }\n }\n if (!found) throw NoSuchElementException("Array contains no
element matching the predicate.})\n @Suppress("UNCHECKED_CAST")\n return single as Char}\n\n/**\n
* Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic fun <T>
Array<out T>.singleOrNull(): T? {\n return if (size == 1) this[0] else null}\n\n/**\n * Returns single element, or `null`
if the array is empty or has more than one element.\n */\npublic fun ByteArray.singleOrNull(): Byte? {\n
return if (size == 1) this[0] else null}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n */\npublic fun ShortArray.singleOrNull(): Short? {\n return if (size == 1) this[0] else
null}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic
fun IntArray.singleOrNull(): Int? {\n return if (size == 1) this[0] else null}\n\n/**\n * Returns single element, or `null`
if the array is empty or has more than one element.\n */\npublic fun LongArray.singleOrNull(): Long? {\n
return if (size == 1) this[0] else null}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n */\npublic fun FloatArray.singleOrNull(): Float? {\n return if (size == 1) this[0] else
null}\n\n/**\n * Returns single element, or `null` if the array is empty or has more than one element.\n */\npublic
fun DoubleArray.singleOrNull(): Double? {\n return if (size == 1) this[0] else null}\n\n/**\n * Returns single
element, or `null` if the array is empty or has more than one element.\n */\npublic fun BooleanArray.singleOrNull():
Boolean? {\n return if (size == 1) this[0] else null}\n\n/**\n * Returns single element, or `null` if the array is
empty or has more than one element.\n */\npublic fun CharArray.singleOrNull(): Char? {\n return if (size == 1)
this[0] else null}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not
found or more than one element was found.\n */\npublic inline fun <T> Array<out T>.singleOrNull(predicate: (T) -
> Boolean): T? {\n var single: T? = null\n var found = false\n for (element in this) {\n if
(predicate(element)) {\n if (found) return null\n single = element\n found = true\n }\n }\n
if (!found) return null\n return single}\n\n/**\n * Returns the single element matching the given [predicate], or
`null` if element was not found or more than one element was found.\n */\npublic inline fun
ByteArray.singleOrNull(predicate: (Byte) -> Boolean): Byte? {\n var single: Byte? = null\n var found = false\n
for (element in this) {\n if (predicate(element)) {\n if (found) return null\n single = element\n

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    found = true\n    }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the single element
matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic
inline fun ShortArray.singleOrNull(predicate: (Short) -> Boolean): Short? {\n    var single: Short? = null\n    var
found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single
= element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n */\npublic inline fun IntArray.singleOrNull(predicate: (Int) -> Boolean): Int? {\n    var single: Int? = null\n
var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n
single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n *
Returns the single element matching the given [predicate], or `null` if element was not found or more than one
element was found.\n */\npublic inline fun LongArray.singleOrNull(predicate: (Long) -> Boolean): Long? {\n    var
single: Long? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if
(found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return
single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or
more than one element was found.\n */\npublic inline fun FloatArray.singleOrNull(predicate: (Float) -> Boolean):
Float? {\n    var single: Float? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element))
{\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return
null\n    return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element
was not found or more than one element was found.\n */\npublic inline fun DoubleArray.singleOrNull(predicate:
(Double) -> Boolean): Double? {\n    var single: Double? = null\n    var found = false\n    for (element in this) {\n
if (predicate(element)) {\n        if (found) return null\n        single = element\n        found = true\n    }\n    }\n    if (!found) return
null\n    return single\n}\n\n/**\n * Returns the single element matching the given
[predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun
BooleanArray.singleOrNull(predicate: (Boolean) -> Boolean): Boolean? {\n    var single: Boolean? = null\n    var
found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n
single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns the
single element matching the given [predicate], or `null` if element was not found or more than one element was
found.\n */\npublic inline fun CharArray.singleOrNull(predicate: (Char) -> Boolean): Char? {\n    var single: Char?
= null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return
null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return
single\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Array<out T>.drop(n: Int): List<T> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun ByteArray.drop(n: Int): List<Byte> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun ShortArray.drop(n: Int): List<Short> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun IntArray.drop(n: Int): List<Int> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n    return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample

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samples.collections.Collections.Transformations.drop\n *\npublic fun LongArray.drop(n: Int): List<Long> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun FloatArray.drop(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun DoubleArray.drop(n: Int): List<Double> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun BooleanArray.drop(n: Int): List<Boolean>
{\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun CharArray.drop(n: Int): List<Char> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun <T> Array<out T>.dropLast(n: Int): List<T>
{\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun ByteArray.dropLast(n: Int): List<Byte> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun ShortArray.dropLast(n: Int): List<Short> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun IntArray.dropLast(n: Int): List<Int> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun LongArray.dropLast(n: Int): List<Long> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun FloatArray.dropLast(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun DoubleArray.dropLast(n: Int): List<Double>
{\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample

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samples.collections.Collections.Transformations.drop\n *\npublic fun BooleanArray.dropLast(n: Int):
List<Boolean> {\n  require(n >= 0) {\n    "Requested element count $n is less than zero.\n" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws
IllegalArgumentExcepion if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic fun CharArray.dropLast(n: Int): List<Char> {\n
require(n >= 0) {\n    "Requested element count $n is less than zero.\n" }\n  return take((size -
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given
[predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun <T>
Array<out T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n  for (index in lastIndex downTo 0) {\n    if
(!predicate(this[index])) {\n      return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns
a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun ByteArray.dropLastWhile(predicate:
(Byte) -> Boolean): List<Byte> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun ShortArray.dropLastWhile(predicate:
(Short) -> Boolean): List<Short> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun IntArray.dropLastWhile(predicate:
(Int) -> Boolean): List<Int> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun LongArray.dropLastWhile(predicate:
(Long) -> Boolean): List<Long> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun FloatArray.dropLastWhile(predicate:
(Float) -> Boolean): List<Float> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun DoubleArray.dropLastWhile(predicate:
(Double) -> Boolean): List<Double> {\n  for (index in lastIndex downTo 0) {\n    if (!predicate(this[index])) {\n
return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n * Returns a list containing all elements
except last elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun
BooleanArray.dropLastWhile(predicate: (Boolean) -> Boolean): List<Boolean> {\n  for (index in lastIndex
downTo 0) {\n    if (!predicate(this[index])) {\n      return take(index + 1)\n    }\n  }\n  return
emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given
[predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun
CharArray.dropLastWhile(predicate: (Char) -> Boolean): List<Char> {\n  for (index in lastIndex downTo 0) {\n
if (!predicate(this[index])) {\n      return take(index + 1)\n    }\n  }\n  return emptyList()\n}\n\n/**\n *
Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.drop\n *\npublic inline fun <T> Array<out
T>.dropWhile(predicate: (T) -> Boolean): List<T> {\n  var yielding = false\n  val list = ArrayList<T>()\n  for
(item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item)) {\n      list.add(item)\n
yielding = true\n    }\n  return list\n}\n\n/**\n * Returns a list containing all elements except first elements that
satisfy the given [predicate].\n * \n * @sample

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inline fun ByteArray.dropWhile(predicate: (Byte) -> Boolean): List<Byte> {
    var yielding = false
    val list = ArrayList<Byte>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun ShortArray.dropWhile(predicate: (Short) -> Boolean): List<Short> {
    var yielding = false
    val list = ArrayList<Short>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun IntArray.dropWhile(predicate: (Int) -> Boolean): List<Int> {
    var yielding = false
    val list = ArrayList<Int>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun LongArray.dropWhile(predicate: (Long) -> Boolean): List<Long> {
    var yielding = false
    val list = ArrayList<Long>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun FloatArray.dropWhile(predicate: (Float) -> Boolean): List<Float> {
    var yielding = false
    val list = ArrayList<Float>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun DoubleArray.dropWhile(predicate: (Double) -> Boolean): List<Double> {
    var yielding = false
    val list = ArrayList<Double>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun BooleanArray.dropWhile(predicate: (Boolean) -> Boolean): List<Boolean> {
    var yielding = false
    val list = ArrayList<Boolean>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing all elements except first elements that satisfy the given [predicate].
 * @sample
samples.collections.Collections.Transformations.drop
 */
public inline fun CharArray.dropWhile(predicate: (Char) -> Boolean): List<Char> {
    var yielding = false
    val list = ArrayList<Char>()
    for (item in this)
        if (yielding) list.add(item)
        else if (!predicate(item)) {
            list.add(item)
            yielding = true
        }
    return list
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample
samples.collections.Collections.Filtering.filter
 */
public inline fun <T> Array<out T>.filter(predicate: (T) -> Boolean): List<T> {
    return filterTo(ArrayList<T>(), predicate)
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample
samples.collections.Collections.Filtering.filter
 */
public inline fun ByteArray.filter(predicate: (Byte) -> Boolean): List<Byte> {
    return filterTo(ArrayList<Byte>(), predicate)
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample
samples.collections.Collections.Filtering.filter
 */
public inline fun ShortArray.filter(predicate: (Short) -> Boolean): List<Short> {
    return filterTo(ArrayList<Short>(), predicate)
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample
samples.collections.Collections.Filtering.filter
 */
public inline fun IntArray.filter(predicate: (Int) -> Boolean): List<Int> {
    return filterTo(ArrayList<Int>(), predicate)
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample
samples.collections.Collections.Filtering.filter
 */
public inline fun LongArray.filter(predicate: (Long) -> Boolean): List<Long> {
    return filterTo(ArrayList<Long>(), predicate)
}
/** Returns a list containing only elements matching the given [predicate].
 * @sample

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samples.collections.Collections.Filtering.filter\n *\npublic inline fun FloatArray.filter(predicate: (Float) ->
Boolean): List<Float> {\n  return filterTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing
only elements matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n
*\npublic inline fun DoubleArray.filter(predicate: (Double) -> Boolean): List<Double> {\n  return
filterTo(ArrayList<Double>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given
[predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n *\npublic inline fun
BooleanArray.filter(predicate: (Boolean) -> Boolean): List<Boolean> {\n  return filterTo(ArrayList<Boolean>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n *\npublic inline fun CharArray.filter(predicate: (Char) ->
Boolean): List<Char> {\n  return filterTo(ArrayList<Char>(), predicate)\n}\n\n/**\n * Returns a list containing
only elements matching the given [predicate].\n * @param [predicate] function that takes the index of an element
and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun <T> Array<out
T>.filterIndexed(predicate: (index: Int, T) -> Boolean): List<T> {\n  return filterIndexedTo(ArrayList<T>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n *\npublic
inline fun ByteArray.filterIndexed(predicate: (index: Int, Byte) -> Boolean): List<Byte> {\n  return
filterIndexedTo(ArrayList<Byte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun ShortArray.filterIndexed(predicate:
(index: Int, Short) -> Boolean): List<Short> {\n  return filterIndexedTo(ArrayList<Short>(), predicate)\n}\n\n/**\n
* Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes
the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n
* @sample samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun
IntArray.filterIndexed(predicate: (index: Int, Int) -> Boolean): List<Int> {\n  return
filterIndexedTo(ArrayList<Int>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun LongArray.filterIndexed(predicate:
(index: Int, Long) -> Boolean): List<Long> {\n  return filterIndexedTo(ArrayList<Long>(), predicate)\n}\n\n/**\n
* Returns a list containing only elements matching the given [predicate].\n * @param [predicate] function that takes
the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n
* @sample samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun
FloatArray.filterIndexed(predicate: (index: Int, Float) -> Boolean): List<Float> {\n  return
filterIndexedTo(ArrayList<Float>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n *\npublic inline fun DoubleArray.filterIndexed(predicate:
(index: Int, Double) -> Boolean): List<Double> {\n  return filterIndexedTo(ArrayList<Double>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n *\npublic
inline fun BooleanArray.filterIndexed(predicate: (index: Int, Boolean) -> Boolean): List<Boolean> {\n  return
filterIndexedTo(ArrayList<Boolean>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching
the given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n *
and returns the result of predicate evaluation on the element.\n * \n * @sample

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samples.collections.Collections.Filtering.filterIndexed\n * \npublic inline fun CharArray.filterIndexed(predicate:
(index: Int, Char) -> Boolean): List<Char> {\n    return filterIndexedTo(ArrayList<Char>(), predicate)\n}\n\n/**\n *
Appends all elements matching the given [predicate] to the given [destination].\n * @param [predicate] function that
takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the
element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n * \npublic inline fun <T, C :
MutableCollection<in T>> Array<out T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C
{\n    forEachIndexed { index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n}
return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *
@param [predicate] function that takes the index of an element and the element itself\n * and returns the result of
predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n *
\npublic inline fun <C : MutableCollection<in Byte>> ByteArray.filterIndexedTo(destination: C, predicate:
(index: Int, Byte) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element))
destination.add(element)\n    }\n} return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n * \npublic inline fun <C : MutableCollection<in Short>>
ShortArray.filterIndexedTo(destination: C, predicate: (index: Int, Short) -> Boolean): C {\n    forEachIndexed {
index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n} return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *
@param [predicate] function that takes the index of an element and the element itself\n * and returns the result of
predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n *
\npublic inline fun <C : MutableCollection<in Int>> IntArray.filterIndexedTo(destination: C, predicate: (index:
Int, Int) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element))
destination.add(element)\n    }\n} return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n * \npublic inline fun <C : MutableCollection<in Long>>
LongArray.filterIndexedTo(destination: C, predicate: (index: Int, Long) -> Boolean): C {\n    forEachIndexed {
index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n} return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *
@param [predicate] function that takes the index of an element and the element itself\n * and returns the result of
predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n *
\npublic inline fun <C : MutableCollection<in Float>> FloatArray.filterIndexedTo(destination: C, predicate:
(index: Int, Float) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element))
destination.add(element)\n    }\n} return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n * \npublic inline fun <C : MutableCollection<in
Double>> DoubleArray.filterIndexedTo(destination: C, predicate: (index: Int, Double) -> Boolean): C {\n   
forEachIndexed { index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n}
return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n *
@param [predicate] function that takes the index of an element and the element itself\n * and returns the result of
predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n *
\npublic inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterIndexedTo(destination: C, predicate:
(index: Int, Boolean) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element))
destination.add(element)\n    }\n} return destination\n}\n\n/**\n * Appends all elements matching the given
[predicate] to the given [destination].\n * @param [predicate] function that takes the index of an element and the
element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample

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samples.collections.Collections.Filtering.filterIndexedTo\n *^\\npublic inline fun <C : MutableCollection<in Char>>
CharArray.filterIndexedTo(destination: C, predicate: (index: Int, Char) -> Boolean): C {\\n  forEachIndexed {
index, element ->\\n    if (predicate(index, element)) destination.add(element)\\n  }\\n  return
destination\\n}\\n\\n/**\\n * Returns a list containing all elements that are instances of specified type parameter R.\\n *
\\n * @sample samples.collections.Collections.Filtering.filterIsInstance\n *^\\npublic inline fun <reified R>
Array<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\\n  return
filterIsInstanceTo(ArrayList<R>())\\n}\\n\\n/**\\n * Appends all elements that are instances of specified type
parameter R to the given [destination].\\n * \\n * @sample
samples.collections.Collections.Filtering.filterIsInstanceTo\n *^\\npublic inline fun <reified R, C :
MutableCollection<in R>> Array<*>.filterIsInstanceTo(destination: C): C {\\n  for (element in this) if (element is
R) destination.add(element)\\n  return destination\\n}\\n\\n/**\\n * Returns a list containing all elements not matching
the given [predicate].\\n * \\n * @sample samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun <T>
Array<out T>.filterNot(predicate: (T) -> Boolean): List<T> {\\n  return filterNotTo(ArrayList<T>(),
predicate)\\n}\\n\\n/**\\n * Returns a list containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun ByteArray.filterNot(predicate: (Byte) ->
Boolean): List<Byte> {\\n  return filterNotTo(ArrayList<Byte>(), predicate)\\n}\\n\\n/**\\n * Returns a list containing
all elements not matching the given [predicate].\\n * \\n * @sample samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun ShortArray.filterNot(predicate: (Short) -> Boolean): List<Short> {\\n  return
filterNotTo(ArrayList<Short>(), predicate)\\n}\\n\\n/**\\n * Returns a list containing all elements not matching the
given [predicate].\\n * \\n * @sample samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun
IntArray.filterNot(predicate: (Int) -> Boolean): List<Int> {\\n  return filterNotTo(ArrayList<Int>(),
predicate)\\n}\\n\\n/**\\n * Returns a list containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun LongArray.filterNot(predicate: (Long) ->
Boolean): List<Long> {\\n  return filterNotTo(ArrayList<Long>(), predicate)\\n}\\n\\n/**\\n * Returns a list
containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun FloatArray.filterNot(predicate: (Float) ->
Boolean): List<Float> {\\n  return filterNotTo(ArrayList<Float>(), predicate)\\n}\\n\\n/**\\n * Returns a list
containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun DoubleArray.filterNot(predicate: (Double) ->
Boolean): List<Double> {\\n  return filterNotTo(ArrayList<Double>(), predicate)\\n}\\n\\n/**\\n * Returns a list
containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun BooleanArray.filterNot(predicate: (Boolean) -
> Boolean): List<Boolean> {\\n  return filterNotTo(ArrayList<Boolean>(), predicate)\\n}\\n\\n/**\\n * Returns a list
containing all elements not matching the given [predicate].\\n * \\n * @sample
samples.collections.Collections.Filtering.filter\n *^\\npublic inline fun CharArray.filterNot(predicate: (Char) ->
Boolean): List<Char> {\\n  return filterNotTo(ArrayList<Char>(), predicate)\\n}\\n\\n/**\\n * Returns a list containing
all elements that are not `null`.\\n * \\n * @sample samples.collections.Collections.Filtering.filterNotNull\n *^\\npublic
fun <T : Any> Array<out T?>.filterNotNull(): List<T> {\\n  return filterNotNullTo(ArrayList<T>())\\n}\\n\\n/**\\n *
Appends all elements that are not `null` to the given [destination].\\n * \\n * @sample
samples.collections.Collections.Filtering.filterNotNullTo\n *^\\npublic fun <C : MutableCollection<in T>, T : Any>
Array<out T?>.filterNotNullTo(destination: C): C {\\n  for (element in this) if (element != null)
destination.add(element)\\n  return destination\\n}\\n\\n/**\\n * Appends all elements not matching the given
[predicate] to the given [destination].\\n * \\n * @sample samples.collections.Collections.Filtering.filterTo\n *^\\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterNotTo(destination: C, predicate: (T) ->
Boolean): C {\\n  for (element in this) if (!predicate(element)) destination.add(element)\\n  return
destination\\n}\\n\\n/**\\n * Appends all elements not matching the given [predicate] to the given [destination].\\n * \\n *
@sample samples.collections.Collections.Filtering.filterTo\n *^\\npublic inline fun <C : MutableCollection<in
Byte>> ByteArray.filterNotTo(destination: C, predicate: (Byte) -> Boolean): C {\\n  for (element in this) if

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(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Short>>
ShortArray.filterNotTo(destination: C, predicate: (Short) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Int>>
IntArray.filterNotTo(destination: C, predicate: (Int) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Long>>
LongArray.filterNotTo(destination: C, predicate: (Long) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Float>>
FloatArray.filterNotTo(destination: C, predicate: (Float) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Double>>
DoubleArray.filterNotTo(destination: C, predicate: (Double) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Boolean>>
BooleanArray.filterNotTo(destination: C, predicate: (Boolean) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements not
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Char>>
CharArray.filterNotTo(destination: C, predicate: (Char) -> Boolean): C {\n for (element in this) if
(!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <T, C : MutableCollection<in T>> Array<out T>.filterTo(destination: C, predicate: (T) ->
Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in
Byte>> ByteArray.filterTo(destination: C, predicate: (Byte) -> Boolean): C {\n for (element in this) if
(predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
*\npublic inline fun <C : MutableCollection<in Short>> ShortArray.filterTo(destination: C, predicate: (Short) ->
Boolean): C {\n for (element in this) if (predicate(element)) destination.add(element)\n return
destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Int>>
IntArray.filterTo(destination: C, predicate: (Int) -> Boolean): C {\n for (element in this) if (predicate(element))
destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements matching the given [predicate] to
the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun
<C : MutableCollection<in Long>> LongArray.filterTo(destination: C, predicate: (Long) -> Boolean): C {\n for
(element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all
elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <C : MutableCollection<in Float>>

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FloatArray.filterTo(destination: C, predicate: (Float) -> Boolean): C {
    for (element in this) if (predicate(element)) destination.add(element)
    return destination
}

@sample samples.collections.Collections.Filtering.filterTo
public inline fun <C : MutableCollection<in Double>> DoubleArray.filterTo(destination: C, predicate: (Double)
-> Boolean): C {
    for (element in this) if (predicate(element)) destination.add(element)
    return destination
}

@sample samples.collections.Collections.Filtering.filterTo
public inline fun <C : MutableCollection<in Boolean>> BooleanArray.filterTo(destination: C, predicate: (Boolean) -> Boolean): C {
    for (element in this) if (predicate(element)) destination.add(element)
    return destination
}

@sample samples.collections.Collections.Filtering.filterTo
public inline fun <C : MutableCollection<in Char>> CharArray.filterTo(destination: C, predicate: (Char) ->
Boolean): C {
    for (element in this) if (predicate(element)) destination.add(element)
    return destination
}

public fun <T> Array<out T>.slice(indices: IntRange): List<T> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun ByteArray.slice(indices: IntRange): List<Byte> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun ShortArray.slice(indices: IntRange): List<Short> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun IntArray.slice(indices: IntRange): List<Int> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun LongArray.slice(indices: IntRange): List<Long> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun FloatArray.slice(indices: IntRange): List<Float> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun DoubleArray.slice(indices: IntRange): List<Double> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun BooleanArray.slice(indices: IntRange): List<Boolean> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun CharArray.slice(indices: IntRange): List<Char> {
    if (indices.isEmpty()) return listOf()
    return copyOfRange(indices.start, indices.endInclusive + 1).asList()
}

public fun <T> Array<out T>.slice(indices: Iterable<Int>): List<T> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<T>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

public fun ByteArray.slice(indices: Iterable<Int>): List<Byte> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<Byte>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

public fun ShortArray.slice(indices: Iterable<Int>): List<Short> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<Short>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

public fun IntArray.slice(indices: Iterable<Int>): List<Int> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<Int>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

public fun LongArray.slice(indices: Iterable<Int>): List<Long> {
    val size =

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indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<Long>(size)\n
for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns a list containing
elements at specified [indices].\n */\npublic fun FloatArray.slice(indices: Iterable<Int>): List<Float> {\n val size =
indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list = ArrayList<Float>(size)\n
for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n * Returns a list containing
elements at specified [indices].\n */\npublic fun DoubleArray.slice(indices: Iterable<Int>): List<Double> {\n val
size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list =
ArrayList<Double>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n *
Returns a list containing elements at specified [indices].\n */\npublic fun BooleanArray.slice(indices: Iterable<Int>):
List<Boolean> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list
= ArrayList<Boolean>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n *
Returns a list containing elements at specified [indices].\n */\npublic fun CharArray.slice(indices: Iterable<Int>):
List<Char> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list =
ArrayList<Char>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n *
Returns an array containing elements of this array at specified [indices].\n */\npublic fun <T>
Array<T>.sliceArray(indices: Collection<Int>): Array<T> {\n val result = arrayOfNulls(this, indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
ByteArray.sliceArray(indices: Collection<Int>): ByteArray {\n val result = ByteArray(indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
ShortArray.sliceArray(indices: Collection<Int>): ShortArray {\n val result = ShortArray(indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
IntArray.sliceArray(indices: Collection<Int>): IntArray {\n val result = IntArray(indices.size)\n var targetIndex
= 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
LongArray.sliceArray(indices: Collection<Int>): LongArray {\n val result = LongArray(indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
FloatArray.sliceArray(indices: Collection<Int>): FloatArray {\n val result = FloatArray(indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
DoubleArray.sliceArray(indices: Collection<Int>): DoubleArray {\n val result = DoubleArray(indices.size)\n
var targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n
return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
BooleanArray.sliceArray(indices: Collection<Int>): BooleanArray {\n val result = BooleanArray(indices.size)\n
var targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n
return result\n}\n\n/**\n * Returns an array containing elements of this array at specified [indices].\n */\npublic fun
CharArray.sliceArray(indices: Collection<Int>): CharArray {\n val result = CharArray(indices.size)\n var
targetIndex = 0\n for (sourceIndex in indices) {\n result[targetIndex++] = this[sourceIndex]\n }\n return
result\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun
<T> Array<T>.sliceArray(indices: IntRange): Array<T> {\n if (indices.isEmpty()) return copyOfRange(0, 0)\n
return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at
indices in the specified [indices] range.\n */\npublic fun ByteArray.sliceArray(indices: IntRange): ByteArray {\n if
(indices.isEmpty()) return ByteArray(0)\n return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n
* Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun
ShortArray.sliceArray(indices: IntRange): ShortArray {\n if (indices.isEmpty()) return ShortArray(0)\n return

```

```

copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices
in the specified [indices] range.\n */\npublic fun IntArray.sliceArray(indices: IntRange): IntArray {\n    if
(indices.isEmpty()) return IntArray(0)\n    return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun
LongArray.sliceArray(indices: IntRange): LongArray {\n    if (indices.isEmpty()) return LongArray(0)\n    return
copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices
in the specified [indices] range.\n */\npublic fun FloatArray.sliceArray(indices: IntRange): FloatArray {\n    if
(indices.isEmpty()) return FloatArray(0)\n    return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun
DoubleArray.sliceArray(indices: IntRange): DoubleArray {\n    if (indices.isEmpty()) return DoubleArray(0)\n
return copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns an array containing elements at
indices in the specified [indices] range.\n */\npublic fun BooleanArray.sliceArray(indices: IntRange): BooleanArray
{\n    if (indices.isEmpty()) return BooleanArray(0)\n    return copyOfRange(indices.start, indices.endInclusive +
1)\n}\n\n/**\n * Returns an array containing elements at indices in the specified [indices] range.\n */\npublic fun
CharArray.sliceArray(indices: IntRange): CharArray {\n    if (indices.isEmpty()) return CharArray(0)\n    return
copyOfRange(indices.start, indices.endInclusive + 1)\n}\n\n/**\n * Returns a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun <T> Array<out T>.take(n: Int): List<T> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<T>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun ByteArray.take(n: Int): List<Byte> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<Byte>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun ShortArray.take(n: Int): List<Short> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<Short>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun IntArray.take(n: Int): List<Int> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<Int>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun LongArray.take(n: Int): List<Long> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<Long>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun FloatArray.take(n: Int): List<Float> {\n
require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >=
size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<Float>(n)\n    for
(item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns
a list containing first [n] elements.\n */\n * @throws IllegalArgumentException if [n] is negative.\n */\n * @sample
samples.collections.Collections.Transformations.take\n */\npublic fun DoubleArray.take(n: Int): List<Double> {\n

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samples.collections.Collections.Transformations.take\n *^\npublic inline fun ByteArray.takeWhile(predicate: (Byte)
-> Boolean): List<Byte> {\n    val list = ArrayList<Byte>()\n    for (item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first elements satisfying the
given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n *^\npublic inline fun
ShortArray.takeWhile(predicate: (Short) -> Boolean): List<Short> {\n    val list = ArrayList<Short>()\n    for (item
in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a
list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n *^\npublic inline fun IntArray.takeWhile(predicate: (Int) ->
Boolean): List<Int> {\n    val list = ArrayList<Int>()\n    for (item in this) {\n        if (!predicate(item))\n
            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first elements
satisfying the
given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n *^\npublic inline fun
LongArray.takeWhile(predicate: (Long) -> Boolean): List<Long> {\n    val list = ArrayList<Long>()\n    for (item
in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a
list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n *^\npublic inline fun FloatArray.takeWhile(predicate:
(Float) -> Boolean): List<Float> {\n    val list = ArrayList<Float>()\n    for (item in this) {\n        if
(!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first
elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*^\npublic inline fun DoubleArray.takeWhile(predicate: (Double) -> Boolean): List<Double> {\n    val list =
ArrayList<Double>()\n    for (item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n
return list\n}\n\n/**\n * Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n *^\npublic inline fun BooleanArray.takeWhile(predicate:
(Boolean) -> Boolean): List<Boolean> {\n    val list = ArrayList<Boolean>()\n    for (item in this) {\n        if
(!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n * Returns a list containing first
elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
*^\npublic inline fun CharArray.takeWhile(predicate: (Char) -> Boolean): List<Char> {\n    val list =
ArrayList<Char>()\n    for (item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n
return list\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun <T> Array<T>.reverse(): Unit {\n
val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun ByteArray.reverse():
Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun ShortArray.reverse():
Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun IntArray.reverse():
Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun LongArray.reverse():
Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun FloatArray.reverse():
Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in
0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n
reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n * \n *^\npublic fun
DoubleArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex =
lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n
}

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this[reverseIndex] = tmp\n    reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n *\npublic fun BooleanArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements in the array in-place.\n *\npublic fun CharArray.reverse(): Unit {\n    val midPoint = (size / 2) - 1\n    if (midPoint < 0) return\n    var reverseIndex = lastIndex\n    for (index in 0..midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\npublic fun <T> Array<T>.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\npublic fun ByteArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\npublic fun ShortArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\npublic fun IntArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.4")\npublic fun LongArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the array in the specified range in-place.\n *\n * @param fromIndex the start of the range (inclusive) to reverse.\n *

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@param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *^\n@SinceKotlin("1.4")\npublic fun
FloatArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex,
size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex =
toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] =
this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the
array in the specified range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to reverse.\n *
@param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *^\n@SinceKotlin("1.4")\npublic fun
DoubleArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex,
size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var reverseIndex =
toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n        this[index] =
this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses elements of the
array in the specified range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to reverse.\n *
@param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *^\n@SinceKotlin("1.4")\npublic fun
BooleanArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex,
toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var
reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n
this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Reverses
elements of the array in the specified range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to
reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *^\n@SinceKotlin("1.4")\npublic
fun CharArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    AbstractList.checkRangeIndexes(fromIndex,
toIndex, size)\n    val midPoint = (fromIndex + toIndex) / 2\n    if (fromIndex == midPoint) return\n    var
reverseIndex = toIndex - 1\n    for (index in fromIndex until midPoint) {\n        val tmp = this[index]\n
this[index] = this[reverseIndex]\n        this[reverseIndex] = tmp\n        reverseIndex--\n    }\n}\n\n/**\n * Returns a
list with elements in reversed order.\n *^\npublic fun <T> Array<out T>.reversed(): List<T> {\n    if (isEmpty())
return emptyList()\n    val list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Returns a list with
elements in reversed order.\n *^\npublic fun ByteArray.reversed(): List<Byte> {\n    if (isEmpty()) return
emptyList()\n    val list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements
in reversed order.\n *^\npublic fun ShortArray.reversed(): List<Short> {\n    if (isEmpty()) return emptyList()\n    val
list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n
*\n *^\npublic fun IntArray.reversed(): List<Int> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *^\npublic fun
LongArray.reversed(): List<Long> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *^\npublic fun
FloatArray.reversed(): List<Float> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *^\npublic fun
DoubleArray.reversed(): List<Double> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *^\npublic fun
BooleanArray.reversed(): List<Boolean> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n *^\npublic fun
CharArray.reversed(): List<Char> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n

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list.reverse()\n    return list\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic
fun <T> Array<T>.reversedArray(): Array<T> {\n    if (isEmpty()) return this\n    val result = arrayOfNulls(this,
size)\n    val lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return
result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun
ByteArray.reversedArray(): ByteArray {\n    if (isEmpty()) return this\n    val result = ByteArray(size)\n    val
lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n *
Returns an array with elements of this array in reversed order.\n */\npublic fun ShortArray.reversedArray():
ShortArray {\n    if (isEmpty()) return this\n    val result = ShortArray(size)\n    val lastIndex = lastIndex\n    for (i in
0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n * Returns an array with elements of this
array in reversed order.\n */\npublic fun IntArray.reversedArray(): IntArray {\n    if (isEmpty()) return this\n    val
result = IntArray(size)\n    val lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n
return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun
LongArray.reversedArray(): LongArray {\n    if (isEmpty()) return this\n    val result = LongArray(size)\n    val
lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n *
Returns an array with elements of this array in reversed order.\n */\npublic fun FloatArray.reversedArray():
FloatArray {\n    if (isEmpty()) return this\n    val result = FloatArray(size)\n    val lastIndex = lastIndex\n    for (i in
0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n * Returns an array with elements of this
array in reversed order.\n */\npublic fun DoubleArray.reversedArray(): DoubleArray {\n    if (isEmpty()) return
this\n    val result = DoubleArray(size)\n    val lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex -
i] = this[i]\n    return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic
fun BooleanArray.reversedArray(): BooleanArray {\n    if (isEmpty()) return this\n    val result =
BooleanArray(size)\n    val lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n
return result\n}\n\n/**\n * Returns an array with elements of this array in reversed order.\n */\npublic fun
CharArray.reversedArray(): CharArray {\n    if (isEmpty()) return this\n    val result = CharArray(size)\n    val
lastIndex = lastIndex\n    for (i in 0..lastIndex)\n        result[lastIndex - i] = this[i]\n    return result\n}\n\n/**\n *
Randomly shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun <T>
Array<T>.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun ByteArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun ShortArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun IntArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun LongArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun FloatArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun DoubleArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n */\n\n@SinceKotlin("1.4")\npublic fun BooleanArray.shuffle(): Unit {\n    shuffle(Random)\n}\n\n/**\n * Randomly
shuffles elements in this array in-place using the specified [random]
instance as the source of randomness.\n */\n\n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
\n@SinceKotlin("1.4")\npublic fun <T> Array<T>.shuffle(random: Random): Unit {\n    for (i in lastIndex
downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random] instance as the
source of randomness.\n */\n\n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
\n@SinceKotlin("1.4")\npublic fun ByteArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo
1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}\n

```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun ShortArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun IntArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun LongArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun FloatArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun DoubleArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun BooleanArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Randomly shuffles elements in this array in-place using the specified [random] instance as the source of randomness.n \* n \* See:  
[https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates\\_shuffle#The\\_modern\\_algorithm](https://en.wikipedia.org/wiki/Fisher%E2%80%93Yates_shuffle#The_modern_algorithm)n

```
*\n@SinceKotlin("1.4")\npublic fun CharArray.shuffle(random: Random): Unit {\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] = this[j]\n        this[j] = copy\n    }\n}
```

}n}n/n/\*\*n \* Sorts elements in the array in-place according to natural sort order of the value returned by specified [selector] function.n \* n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.n \*\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortBy(crossinline selector: (T) -> R?): Unit {\n if (size > 1) sortBy(compareBy(selector))\n}

}n}n/n/\*\*n \* Sorts elements in the array in-place descending according to natural sort order of the value returned by specified [selector] function.n \* n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.n \*\npublic inline fun <T, R : Comparable<R>> Array<out T>.sortByDescending(crossinline selector: (T) -> R?): Unit {\n if (size > 1) sortByDescending(compareByDescending(selector))\n}

}n}n/n/\*\*n \* Sorts elements in the array in-place descending according to their natural sort order.n \* n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.n \*\npublic fun <T : Comparable<T>> Array<out T>.sortDescending(): Unit {\n sortByDescending()\n}

}n}n/n/\*\*n \* Sorts elements in the array in-place descending according to their natural sort order.n \*\npublic fun ByteArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}

}n}n/n/\*\*n \* Sorts elements in the array in-place descending according to their natural sort order.n \*\npublic fun

`ShortArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Sorts elements in the array in-place descending according to their natural sort order.\n \*/\npublic fun

`IntArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Sorts elements in the array in-place descending according to their natural sort order.\n \*/\npublic fun

`LongArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Sorts elements in the array in-place descending according to their natural sort order.\n \*/\npublic fun

`FloatArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Sorts elements in the array in-place descending according to their natural sort order.\n \*/\npublic fun

`DoubleArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Sorts elements in the array in-place descending according to their natural sort order.\n \*/\npublic fun

`CharArray.sortDescending(): Unit` {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \* \n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.\n \*/\npublic fun

`<T : Comparable<T>> Array<out T>.sorted(): List<T>` {\n return sortedArray().asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`ByteArray.sorted(): List<Byte>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`ShortArray.sorted(): List<Short>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`IntArray.sorted(): List<Int>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`LongArray.sorted(): List<Long>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`FloatArray.sorted(): List<Float>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`DoubleArray.sorted(): List<Double>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to their natural sort order.\n \*/\npublic fun

`CharArray.sorted(): List<Char>` {\n return toTypedArray().apply { sort() }.asList()\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \* \n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.\n \*/\npublic fun

`<T : Comparable<T>> Array<T>.sortedArray(): Array<T>` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`ByteArray.sortedArray(): ByteArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`ShortArray.sortedArray(): ShortArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`IntArray.sortedArray(): IntArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`LongArray.sortedArray(): LongArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`FloatArray.sortedArray(): FloatArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`DoubleArray.sortedArray(): DoubleArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted according to their natural sort order.\n \*/\npublic fun

`CharArray.sortedArray(): CharArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted descending according to their natural sort order.\n \* \n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.\n \*/\npublic fun

`<T : Comparable<T>> Array<T>.sortedArrayDescending(): Array<T>` {\n if (isEmpty()) return this\n return this.copyOf().apply { sortWith(reverseOrder()) }\n}\n\n/\*\*\n \* Returns an array with all elements of this array sorted descending according to their natural sort order.\n \*/\npublic fun

`ByteArray.sortedArrayDescending(): ByteArray` {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/\*\*\n \* Returns an array with all

elements of this array sorted descending according to their natural sort order.

```

public fun
ShortArray.sortedArrayDescending(): ShortArray {
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted descending according to their natural sort order.

```

public fun IntArray.sortedArrayDescending(): IntArray {
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted descending according to their natural sort order.

```

public fun LongArray.sortedArrayDescending():
LongArray {
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted descending according to their natural sort order.

```

public fun
FloatArray.sortedArrayDescending(): FloatArray {
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted descending according to their natural sort order.

```

public fun DoubleArray.sortedArrayDescending(): DoubleArray {
    if (isEmpty())
return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted descending according to their natural sort order.

```

public fun
CharArray.sortedArrayDescending(): CharArray {
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortDescending()
    }
}

```

\* Returns an array with all elements of this array sorted according the specified [comparator].

\* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.

```

public fun <T> Array<out T>.sortedArrayWith(comparator: Comparator<in T>): Array<out T>
{
    if (isEmpty()) return this
    return this.copyOf().apply {
        sortWith(comparator)
    }
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

\* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.

```

@sample samples.collections.Collections.Sorting.sortedBy
public inline fun <T, R : Comparable<R>>
Array<out T>.sortedBy(crossinline selector: (T) -> R?): List<T> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
ByteArray.sortedBy(crossinline selector: (Byte) -> R?): List<Byte> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
ShortArray.sortedBy(crossinline selector: (Short) -> R?): List<Short> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
IntArray.sortedBy(crossinline selector: (Int) -> R?): List<Int> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
LongArray.sortedBy(crossinline selector: (Long) -> R?): List<Long> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
FloatArray.sortedBy(crossinline selector: (Float) -> R?): List<Float> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

```

@sample
samples.collections.Collections.Sorting.sortedBy
public inline fun <R : Comparable<R>>
DoubleArray.sortedBy(crossinline selector: (Double) -> R?): List<Double> {
    return
sortedWith(compareBy(selector))
}

```

\* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.

`samples.collections.Collections.Sorting.sortedBy` \n \* \n public inline fun <R : Comparable<R>>  
`BooleanArray.sortedBy`(crossinline selector: (Boolean) -> R?): List<Boolean> {\n return  
`sortedWith(compareBy(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted according to natural sort order  
of the value returned by specified [selector] function. \n \* \n \* @sample  
`samples.collections.Collections.Sorting.sortedBy` \n \* \n public inline fun <R : Comparable<R>>  
`CharArray.sortedBy`(crossinline selector: (Char) -> R?): List<Char> {\n return  
`sortedWith(compareBy(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending according to natural  
sort order of the value returned by specified [selector] function. \n \* \n \* The sort is `_stable_`. It means that equal  
elements preserve their order relative to each other after sorting. \n \* \n public inline fun <T, R : Comparable<R>>  
`Array<out T>.sortedByDescending`(crossinline selector: (T) -> R?): List<T> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `ByteArray.sortedByDescending`(crossinline selector: (Byte) -> R?): List<Byte> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `ShortArray.sortedByDescending`(crossinline selector: (Short) -> R?): List<Short> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `IntArray.sortedByDescending`(crossinline selector: (Int) -> R?): List<Int> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `LongArray.sortedByDescending`(crossinline selector: (Long) -> R?): List<Long> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `FloatArray.sortedByDescending`(crossinline selector: (Float) -> R?): List<Float> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `DoubleArray.sortedByDescending`(crossinline selector: (Double) -> R?): List<Double> {\n  
return `sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `BooleanArray.sortedByDescending`(crossinline selector: (Boolean) -> R?): List<Boolean> {\n  
return `sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to natural sort order of the value returned by specified [selector] function. \n \* \n public inline fun <R :  
Comparable<R>> `CharArray.sortedByDescending`(crossinline selector: (Char) -> R?): List<Char> {\n return  
`sortedWith(compareByDescending(selector))` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to their natural sort order. \n \* \n \* The sort is `_stable_`. It means that equal elements preserve their order  
relative to each other after sorting. \n \* \n public fun <T : Comparable<T>> `Array<out T>.sortedDescending`():  
List<T> {\n return `sortedWith(reverseOrder())` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending  
according to their natural sort order. \n \* \n public fun `ByteArray.sortedDescending`(): List<Byte> {\n return  
`copyOf().apply { sort() }.reversed()` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending according to their  
natural sort order. \n \* \n public fun `ShortArray.sortedDescending`(): List<Short> {\n return `copyOf().apply { sort()  
}.reversed()` \n} \n \n /\*\* \n \* Returns a list of all elements sorted descending according to their natural sort order. \n  
\* \n public fun `IntArray.sortedDescending`(): List<Int> {\n return `copyOf().apply { sort() }.reversed()` \n} \n \n /\*\* \n  
\* Returns a list of all elements sorted descending according to their natural sort order. \n \* \n public fun  
`LongArray.sortedDescending`(): List<Long> {\n return `copyOf().apply { sort() }.reversed()` \n} \n \n /\*\* \n \* Returns  
a list of all elements sorted descending according to their natural sort order. \n \* \n public fun  
`FloatArray.sortedDescending`(): List<Float> {\n return `copyOf().apply { sort() }.reversed()` \n} \n \n /\*\* \n \* Returns  
a list of all elements sorted descending according to their natural sort order. \n \* \n public fun

DoubleArray.sortedDescending(): List<Double> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/\*\*\n \* Returns a list of all elements sorted descending according to their natural sort order.\n \*/\npublic fun

CharArray.sortedDescending(): List<Char> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \* \n \* The sort is `_stable_`. It means that equal elements preserve their order relative to each other after sorting.\n \*/\npublic fun <T> Array<out T>.sortedWith(comparator: Comparator<in T>): List<T> {\n return

sortedArrayWith(comparator).asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun ByteArray.sortedWith(comparator: Comparator<in Byte>): List<Byte> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun ShortArray.sortedWith(comparator: Comparator<in Short>): List<Short> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun IntArray.sortedWith(comparator: Comparator<in Int>): List<Int> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun

LongArray.sortedWith(comparator: Comparator<in Long>): List<Long> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun FloatArray.sortedWith(comparator: Comparator<in Float>): List<Float> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun DoubleArray.sortedWith(comparator: Comparator<in Double>): List<Double> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun BooleanArray.sortedWith(comparator: Comparator<in Boolean>): List<Boolean> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a list of all elements sorted according to the specified [comparator].\n \*/\npublic fun CharArray.sortedWith(comparator: Comparator<in Char>): List<Char> {\n return toTypedArray().apply { sortWith(comparator) }.asList()\n}\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun <T> Array<out T>.asList(): List<T>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun ByteArray.asList(): List<Byte>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun ShortArray.asList(): List<Short>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun IntArray.asList(): List<Int>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun LongArray.asList(): List<Long>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun FloatArray.asList(): List<Float>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun DoubleArray.asList(): List<Double>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun BooleanArray.asList(): List<Boolean>\n\n/\*\*\n \* Returns a [List] that wraps the original array.\n \*/\npublic expect fun CharArray.asList(): List<Char>\n\n/\*\*\n \* Returns `true` if the two specified arrays are *deeply* equal to one another,\n \* i.e. contain the same number of the same elements in the same order.\n \* \n \* If two corresponding elements are nested arrays, they are also compared deeply.\n \* If any of arrays contains itself on any nesting level the behavior is undefined.\n \* \n \* The elements of other types are compared for equality with the [equals][Any.equals] function.\n \* For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to 0.0`.\n */\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect infix fun <T> Array<out T>.contentDeepEquals(other: Array<out T>): Boolean\n\n/**\n * Returns `true` if the two specified arrays are deeply equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n * The specified arrays are also considered deeply equal if both are null`.\n * \n * If two corresponding elements are nested arrays, they are also compared deeply.\n * If any of arrays contains itself on any nesting level the behavior is undefined.\n * \n * The elements of other types are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and -0.0` is not equal to 0.0`.\n */\n@SinceKotlin("1.4")\npublic expect infix fun <T> Array<out T>?.contentDeepEquals(other: Array<out T>?): Boolean\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n * \n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level the behavior is`

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undefined.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect fun
<T> Array<out T>.contentDeepHashCode(): Int\n/**\n * Returns a hash code based on the contents of this array
as if it is [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level
the behavior is undefined.\n *\n@SinceKotlin("1.4")\npublic expect fun <T> Array<out
T>?.contentDeepHashCode(): Int\n/**\n * Returns a string representation of the contents of this array as if it is a
[List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level that
reference\n * is rendered as `[...]` to prevent recursion.\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentDeepToString\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic expect fun <T> Array<out
T>.contentDeepToString(): String\n/**\n * Returns a string representation of the contents of this array as if it is a
[List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays contains itself on any nesting level that
reference\n * is rendered as `[...]` to prevent recursion.\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentDeepToString\n
*\n@SinceKotlin("1.4")\npublic expect fun
<T> Array<out T>?.contentDeepToString(): String\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect infix fun <T> Array<out T>.contentEquals(other: Array<out T>): Boolean\n/**\n * Returns `true` if the
two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements
in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For
floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect infix fun
ByteArray.contentEquals(other: ByteArray): Boolean\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect infix fun ShortArray.contentEquals(other: ShortArray): Boolean\n/**\n * Returns `true` if the two specified
arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same
order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point
numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect infix fun IntArray.contentEquals(other: IntArray): Boolean\n/**\n * Returns `true` if the
two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements
in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For
floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect infix fun LongArray.contentEquals(other: LongArray): Boolean\n/**\n * Returns `true` if the two specified
arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same
order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point
numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect infix fun FloatArray.contentEquals(other: FloatArray): Boolean\n/**\n * Returns `true` if the two specified
arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same
order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point

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`\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n @SinceKotlin("1.4")\n public expect infix fun CharArray?.contentEquals(other: CharArray?): Boolean\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun <T> Array<out T>.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun ByteArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun ShortArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun IntArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun LongArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun FloatArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun DoubleArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun BooleanArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun CharArray.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun <T> Array<out T>?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun ByteArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun ShortArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun IntArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun LongArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun FloatArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun DoubleArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun BooleanArray?.contentHashCode(): Int\n\n /**\n * Returns a hash code based on the contents of this array as if it is [List].\n */\n @SinceKotlin("1.4")\n public expect fun CharArray?.contentHashCode(): Int\n\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n */\n @Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n @SinceKotlin("1.1")\n @DeprecatedSinceKotlin(hiddenSince = "1.4")\n public expect fun <T> Array<out T>.contentToString(): String\n\n /**\n * Returns a string representation of the contents of the specified array as if it is [List].\n */\n * \n * @sample`

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samples.collections.Arrays.ContentOperations.contentToString\n */\n@Deprecated(\n"Use Kotlin compiler 1.4 to
avoid deprecation warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic
expect fun ByteArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the
specified array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
ShortArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
IntArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array as
if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
LongArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
FloatArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
DoubleArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
BooleanArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@Deprecated(\n"Use Kotlin compiler 1.4 to avoid deprecation
warning.\n")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic expect fun
CharArray.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\npublic expect fun <T> Array<out T>?.contentToString(): String\n\n/**\n * Returns a
string representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin("1.4")\npublic expect fun
ByteArray?.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\npublic expect fun ShortArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin("1.4")\npublic expect fun
IntArray?.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified array
as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\npublic expect fun LongArray?.contentToString(): String\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n * \n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n */\n@SinceKotlin("1.4")\npublic expect fun
FloatArray?.contentToString(): String\n\n/**\n * Returns a string representation of the contents of the specified
array as if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*/\n@SinceKotlin("1.4")\npublic expect fun DoubleArray?.contentToString(): String\n\n/**\n * Returns a string

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representation of the contents of the specified array as if it is [List].\n \* \n \* @sample samples.collections.Arrays.ContentOperations.contentToString\n \*/\n@SinceKotlin("1.4")\npublic expect fun BooleanArray?.contentToString(): String\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \* \n \* @sample samples.collections.Arrays.ContentOperations.contentToString\n \*/\n@SinceKotlin("1.4")\npublic expect fun CharArray?.contentToString(): String\n\n/\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n \*/\n@SinceKotlin("1.3")\npublic expect fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T>\n\n/\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n \*/\n@SinceKotlin("1.3")\npublic expect fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ByteArray\n\n/\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n \*/\n@SinceKotlin("1.3")\npublic expect fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): ShortArray\n\n/\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.\n \* \n \* @param destination the array to copy to.\n \* @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n \* @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n \*/\n@SinceKotlin("1.3")\npublic expect fun IntArray.copyInto(destination: IntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): IntArray\n\n/\*\*\n \* Copies this array or its subrange into the [destination] array and returns that array.\n \* \n \* It's allowed to pass the same array in the [destination] and even specify the







@param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun  
 FloatArray.copyOfRange(fromIndex: Int, toIndex: Int): FloatArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun  
 DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun  
 BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray\n\n/\*\*\n \* Returns a new array which is a copy of the specified range of the original array.\n \* \n \* @param fromIndex the start of the range (inclusive) to copy.\n \* @param toIndex the end of the range (exclusive) to copy.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\npublic expect fun  
 CharArray.copyOfRange(fromIndex: Int, toIndex: Int): CharArray\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun <T> Array<T>.fill(element: T, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun ByteArray.fill(element: Byte, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun ShortArray.fill(element: Short, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun IntArray.fill(element: Int, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun LongArray.fill(element: Long, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/\*\*\n \* Fills this array or its subrange with the specified [element] value.\n \* \n \* @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n \* @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n \* @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n \*/\n\n@SinceKotlin("1.3")\npublic expect fun

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greater than [toIndex].\n *\n@SinceKotlin("1.3")\npublic expect fun FloatArray.fill(element: Float, fromIndex: Int
= 0, toIndex: Int = size): Unit\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n *
@param fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range
(exclusive) to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less
than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is
greater than [toIndex].\n *\n@SinceKotlin("1.3")\npublic expect fun DoubleArray.fill(element: Double,
fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Fills this array or its subrange with the specified [element]
value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end
of the range (exclusive) to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n *\n@SinceKotlin("1.3")\npublic expect fun
BooleanArray.fill(element: Boolean, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Fills this array or its
subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0
by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n * \n *
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this
array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\npublic expect fun CharArray.fill(element: Char, fromIndex: Int = 0, toIndex: Int = size):
Unit\n\n/**\n * Returns the range of valid indices for the array.\n *\npublic val <T> Array<out T>.indices:
IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n *\npublic
val ByteArray.indices: IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for
the array.\n *\npublic val ShortArray.indices: IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the
range of valid indices for the array.\n *\npublic val IntArray.indices: IntRange\n    get() = IntRange(0,
lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n *\npublic val LongArray.indices:
IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n *\npublic
val FloatArray.indices: IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the range of valid indices for
the array.\n *\npublic val DoubleArray.indices: IntRange\n    get() = IntRange(0, lastIndex)\n\n/**\n * Returns the
range of valid indices for the array.\n *\npublic val BooleanArray.indices: IntRange\n    get() = IntRange(0,
lastIndex)\n\n/**\n * Returns the range of valid indices for the array.\n *\npublic val CharArray.indices: IntRange\n
    get() = IntRange(0, lastIndex)\n\n/**\n * Returns `true` if the array is empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.isEmpty(): Boolean {\n    return size ==
0\n}\n\n/**\n * Returns `true` if the array is empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n
* Returns `true` if the array is empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.isEmpty():
Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n
* Returns `true` if the array is empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.isEmpty():
Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.isEmpty(): Boolean {\n    return size ==
0\n}\n\n/**\n * Returns `true` if the array is empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n * Returns `true` if the array is empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.isEmpty(): Boolean {\n    return size == 0\n}\n\n/**\n
* Returns `true` if the array is not empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n *\n@kotlin.internal.InlineOnly\npublic inline
fun ShortArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not
empty.\n *\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.isNotEmpty(): Boolean {\n    return

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!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun LongArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not
empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun DoubleArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns `true` if the array is not
empty.\n */\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.isNotEmpty(): Boolean {\n    return
!isEmpty()\n}\n\n/**\n * Returns `true` if the array is not empty.\n */\n@kotlin.internal.InlineOnly\npublic inline
fun CharArray.isNotEmpty(): Boolean {\n    return !isEmpty()\n}\n\n/**\n * Returns the last valid index for the
array.\n */\npublic val <T> Array<out T>.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index
for the array.\n */\npublic val ByteArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val ShortArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val LongArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val FloatArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val DoubleArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val BooleanArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns the last valid index for
the array.\n */\npublic val CharArray.lastIndex: Int\n    get() = size - 1\n\n/**\n * Returns an array containing all
elements of the original array and then the given [element].\n */\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect operator fun <T> Array<T>.plus(element: T):
Array<T>\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun ByteArray.plus(element: Byte): ByteArray\n\n/**\n * Returns an array containing all
elements of the original array and then the given [element].\n */\npublic expect operator fun
ShortArray.plus(element: Short): ShortArray\n\n/**\n * Returns an array containing all elements of the original
array and then the given [element].\n */\npublic expect operator fun IntArray.plus(element: Int): IntArray\n\n/**\n *
Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect
operator fun LongArray.plus(element: Long): LongArray\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n */\npublic expect operator fun FloatArray.plus(element: Float):
FloatArray\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n */\npublic expect operator fun DoubleArray.plus(element: Double): DoubleArray\n\n/**\n * Returns an array
containing all elements of the original array and then the given [element].\n */\npublic expect operator fun
BooleanArray.plus(element: Boolean): BooleanArray\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n */\npublic expect operator fun CharArray.plus(element: Char):
CharArray\n\n/**\n * Returns an array containing all elements of the original array and then all elements of the
given [elements] collection.\n */\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect operator fun <T>
Array<T>.plus(elements: Collection<T>): Array<T>\n\n/**\n * Returns an array containing all elements of the
original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
ByteArray.plus(elements: Collection<Byte>): ByteArray\n\n/**\n * Returns an array containing all elements of the
original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
ShortArray.plus(elements: Collection<Short>): ShortArray\n\n/**\n * Returns an array containing all elements of
the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
IntArray.plus(elements: Collection<Int>): IntArray\n\n/**\n * Returns an array containing all elements of the
original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
LongArray.plus(elements: Collection<Long>): LongArray\n\n/**\n * Returns an array containing all elements of the
original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
FloatArray.plus(elements: Collection<Float>): FloatArray\n\n/**\n * Returns an array containing all elements of the
original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun
DoubleArray.plus(elements: Collection<Double>): DoubleArray\n\n/**\n * Returns an array containing all elements
of the original array and then all elements of the given [elements] collection.\n */\npublic expect operator fun

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`BooleanArray.plus(elements: Collection<Boolean>): BooleanArray` Returns an array containing all elements of the original array and then all elements of the given [elements] collection.

`fun CharArray.plus(elements: Collection<Char>): CharArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect operator fun <T> Array<T>.plus(elements: Array<out T>): Array<T>` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun ByteArray.plus(elements: ByteArray): ByteArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun ShortArray.plus(elements: ShortArray): ShortArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun IntArray.plus(elements: IntArray): IntArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun LongArray.plus(elements: LongArray): LongArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun FloatArray.plus(elements: FloatArray): FloatArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`*\npublic expect operator fun DoubleArray.plus(elements: DoubleArray): DoubleArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`BooleanArray.plus(elements: BooleanArray): BooleanArray` Returns an array containing all elements of the original array and then all elements of the given [elements] array.

`CharArray.plus(elements: CharArray): CharArray` Returns an array containing all elements of the original array and then the given [element].

`*\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect fun <T> Array<T>.plusElement(element: T): Array<T>` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun IntArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun LongArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun ByteArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun ShortArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun DoubleArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun FloatArray.sort(): Unit` Sorts the array in-place.

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArray`

`*\npublic expect fun CharArray.sort(): Unit` Sorts the array in-place according to the natural order of its elements.

`\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.`

`\n * \n * @sample samples.collections.Arrays.Sorting.sortArrayOfComparable`

`*\npublic expect fun <T : Comparable<T>> Array<out T>.sort(): Unit` Sorts a range in the array in-place.

`\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.`

`\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.`

`\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.`

`\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.`

`\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].`

`\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArrayOfComparable`

`*\n@SinceKotlin("1.4")\npublic expect fun <T : Comparable<T>> Array<out T>.sort(fromIndex: Int = 0, toIndex: Int = size): Unit` Sorts a range in the array in-place.

`\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.`

`\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.`

`\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.`

`\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].`

`\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray`

`*\n@SinceKotlin("1.4")\npublic expect fun`

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ByteArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun ShortArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun IntArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun LongArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun FloatArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun DoubleArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts a range in the array in-place.\n * \n *\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n */\n\n@SinceKotlin("1.4")\npublic expect fun CharArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Sorts elements of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Array<out T>.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n    sortWith(reverseOrder(), fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\n\n@SinceKotlin("1.4")\npublic fun ByteArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param

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fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun ShortArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun IntArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun LongArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun FloatArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun DoubleArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified
range in-place.\n * The elements are sorted descending according to their natural sort order.\n * \n * @param
fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\npublic fun CharArray.sortDescending(fromIndex: Int, toIndex: Int): Unit {\n
sort(fromIndex, toIndex)\n reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts the array in-place according to the
order specified by the given [comparator].\n * \n * The sort is _stable_. It means that equal elements preserve their
order relative to each other after sorting.\n */\n\npublic expect fun <T> Array<out T>.sortWith(comparator:
Comparator<in T>): Unit\n\n/**\n * Sorts a range in the array in-place with the given [comparator].\n * \n * The
sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n * \n *
@param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range
(exclusive) to sort, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if
[fromIndex] is greater than [toIndex].\n */\n\npublic expect fun <T> Array<out T>.sortWith(comparator:
Comparator<in T>, fromIndex: Int = 0, toIndex: Int = size): Unit\n\n/**\n * Returns an array of Boolean containing
all of the elements of this generic array.\n */\n\npublic fun Array<out Boolean>.toBooleanArray(): BooleanArray {\n
return BooleanArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Byte containing all of the
elements of this generic array.\n */\n\npublic fun Array<out Byte>.toByteArray(): ByteArray {\n return
ByteArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Char containing all of the elements of this

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generic array.\n */\npublic fun Array<out Char>.toCharArray(): CharArray {\n    return CharArray(size) { index ->
this[index] }\n}\n\n/**\n * Returns an array of Double containing all of the elements of this generic array.\n
*/\npublic fun Array<out Double>.toDoubleArray(): DoubleArray {\n    return DoubleArray(size) { index ->
this[index] }\n}\n\n/**\n * Returns an array of Float containing all of the elements of this generic array.\n
*/\npublic fun Array<out Float>.toFloatArray(): FloatArray {\n    return FloatArray(size) { index -> this[index] }\n}\n\n/**\n *
Returns an array of Int containing all of the elements of this generic array.\n
*/\npublic fun Array<out
Int>.toIntArray(): IntArray {\n    return IntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of
Long containing all of the elements of this generic array.\n
*/\npublic fun Array<out Long>.toLongArray():
LongArray {\n    return LongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of Short containing
all of the elements of this generic array.\n
*/\npublic fun Array<out Short>.toShortArray(): ShortArray {\n    return
ShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n
*/\npublic expect fun ByteArray.toTypedArray(): Array<Byte>\n\n/**\n * Returns a
*typed* object array containing all of the elements of this primitive array.\n
*/\npublic expect fun
ShortArray.toTypedArray(): Array<Short>\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n
*/\npublic expect fun
IntArray.toTypedArray(): Array<Int>\n\n/**\n * Returns a *typed*
object array containing all of the elements of this primitive array.\n
*/\npublic expect fun
LongArray.toTypedArray(): Array<Long>\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n
*/\npublic expect fun
FloatArray.toTypedArray(): Array<Float>\n\n/**\n * Returns a
*typed* object array containing all of the elements of this primitive array.\n
*/\npublic expect fun
DoubleArray.toTypedArray(): Array<Double>\n\n/**\n * Returns a *typed* object array containing all of the
elements of this primitive array.\n
*/\npublic expect fun
BooleanArray.toTypedArray(): Array<Boolean>\n\n/**\n * Returns a *typed* object array containing all of the elements
of this primitive array.\n
*/\npublic expect fun
CharArray.toTypedArray(): Array<Char>\n\n/**\n * Returns a [Map] containing key-value pairs provided by
[transform] function\n * applied to elements of the given array.\n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original
array.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n
*/\npublic inline
fun <T, K, V> Array<out T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to
elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n
*/\npublic inline fun <K, V>
ByteArray.associate(transform: (Byte) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to
elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n
*/\npublic inline fun <K, V>
ShortArray.associate(transform: (Short) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to
elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitives\n
*/\npublic inline fun <K, V>
IntArray.associate(transform: (Int) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(size).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by [transform] function\n * applied to
elements of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the

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map.  
 \* The returned map preserves the entry iteration order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitives  
 public inline fun <K, V>  
 LongArray.associate(transform: (Long) -> Pair<K, V>): Map<K, V> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateTo(LinkedHashMap<K, V>(capacity),  
 transform)}  
 Returns a [Map] containing key-value pairs provided by [transform] function  
 applied to elements of the given array.  
 \* If any of two pairs would have the same key the last one gets added to the  
 map.  
 \* The returned map preserves the entry iteration order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitives  
 public inline fun <K, V>  
 FloatArray.associate(transform: (Float) -> Pair<K, V>): Map<K, V> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateTo(LinkedHashMap<K, V>(capacity),  
 transform)}  
 Returns a [Map] containing key-value pairs provided by [transform] function  
 applied to elements of the given array.  
 \* If any of two pairs would have the same key the last one gets added to the  
 map.  
 \* The returned map preserves the entry iteration order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitives  
 public inline fun <K, V>  
 DoubleArray.associate(transform: (Double) -> Pair<K, V>): Map<K, V> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateTo(LinkedHashMap<K, V>(capacity),  
 transform)}  
 Returns a [Map] containing key-value pairs provided by [transform] function  
 applied to elements of the given array.  
 \* If any of two pairs would have the same key the last one gets added to the  
 map.  
 \* The returned map preserves the entry iteration order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitives  
 public inline fun <K, V>  
 BooleanArray.associate(transform: (Boolean) -> Pair<K, V>): Map<K, V> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateTo(LinkedHashMap<K, V>(capacity),  
 transform)}  
 Returns a [Map] containing key-value pairs provided by [transform] function  
 applied to elements of the given array.  
 \* If any of two pairs would have the same key the last one gets added to the  
 map.  
 \* The returned map preserves the entry iteration order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitives  
 public inline fun <K, V>  
 CharArray.associate(transform: (Char) -> Pair<K, V>): Map<K, V> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateTo(LinkedHashMap<K, V>(capacity),  
 transform)}  
 Returns a [Map] containing the elements from the given array indexed by the key  
 returned from [keySelector] function applied to each element.  
 \* If any two elements would have the same key  
 returned by [keySelector] the last one gets added to the map.  
 \* The returned map preserves the entry iteration  
 order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy  
 public inline fun <T, K>  
 Array<out T>.associateBy(keySelector: (T) -> K): Map<K, T> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateByTo(LinkedHashMap<K, T>(capacity),  
 keySelector)}  
 Returns a [Map] containing the elements from the given array indexed by the key  
 returned from [keySelector] function applied to each element.  
 \* If any two elements would have the same key  
 returned by [keySelector] the last one gets added to the map.  
 \* The returned map preserves the entry iteration  
 order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy  
 public inline fun <K>  
 ByteArray.associateBy(keySelector: (Byte) -> K): Map<K, Byte> {  
 val capacity =  
 mapCapacity(size).coerceAtLeast(16)  
 return associateByTo(LinkedHashMap<K, Byte>(capacity),  
 keySelector)}  
 Returns a [Map] containing the elements from the given array indexed by the key  
 returned from [keySelector] function applied to each element.  
 \* If any two elements would have the same key  
 returned by [keySelector] the last one gets added to the map.  
 \* The returned map preserves the entry iteration  
 order of the original array.  
 @sample  
 samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy  
 public inline fun <K>  
 ShortArray.associateBy(keySelector: (Short) -> K): Map<K, Short> {  
 val capacity =

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mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Short>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
IntArray.associateBy(keySelector: (Int) -> K): Map<K, Int> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Int>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
LongArray.associateBy(keySelector: (Long) -> K): Map<K, Long> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Long>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
FloatArray.associateBy(keySelector: (Float) -> K): Map<K, Float> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Float>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
DoubleArray.associateBy(keySelector: (Double) -> K): Map<K, Double> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Double>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
BooleanArray.associateBy(keySelector: (Boolean) -> K): Map<K, Boolean> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Boolean>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the elements from the given array indexed by the key\n *
returned from [keySelector] function applied to each element.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesBy\n */\npublic inline fun <K>
CharArray.associateBy(keySelector: (Char) -> K): Map<K, Char> {\n  val capacity =
mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, Char>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by
[keySelector] functions applied to elements of the given array.\n * \n * If any two elements would have the same key
returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry iteration
order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n */\npublic inline

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fun <T, K, V> Array<out T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> ByteArray.associateBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> ShortArray.associateBy(keySelector: (Short) -> K, valueTransform: (Short) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> IntArray.associateBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> LongArray.associateBy(keySelector: (Long) -> K, valueTransform: (Long) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> FloatArray.associateBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

public inline fun <K, V> DoubleArray.associateBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, V> {
    val capacity = mapCapacity(size).coerceAtLeast(16)
    return associateByTo(LinkedHashMap<K, V>(capacity),
        keySelector, valueTransform)
}

/**
 * Returns a [Map] containing the values provided by [valueTransform]
 * and indexed by [keySelector] functions applied to elements of the given array.
 * If any two elements would have the same key returned by [keySelector]
 * the last one gets added to the map.
 * The returned map preserves the entry iteration order of the original array.
 * @sample
 */
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform

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samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n *\npublic inline
fun <K, V> BooleanArray.associateBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, V>
{\n  val capacity = mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K,
V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Returns a [Map] containing the values provided by
[valueTransform] and indexed by [keySelector] functions applied to elements of the given array.\n * \n * If any two
elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByWithValueTransform\n *\npublic inline
fun <K, V> CharArray.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {\n  val
capacity = mapCapacity(size).coerceAtLeast(16)\n  return associateByTo(LinkedHashMap<K, V>(capacity),
keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value
pairs,\n * where key is provided by the [keySelector] function applied to each element of the given array\n * and
value is the element itself.\n * \n * If any two elements would have the same key returned by [keySelector] the last
one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <T, K, M :
MutableMap<in K, in T>> Array<out T>.associateByTo(destination: M, keySelector: (T) -> K): M {\n  for
(element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n *
Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any
two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n *
@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Byte>> ByteArray.associateByTo(destination: M, keySelector: (Byte) -> K): M {\n  for
(element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n *
Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any
two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n *
@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Short>> ShortArray.associateByTo(destination: M, keySelector: (Short) -> K): M {\n
for (element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n
* Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any
two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n *
@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Int>> IntArray.associateByTo(destination: M, keySelector: (Int) -> K): M {\n  for
(element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n
* Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any
two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n *
@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Long>> LongArray.associateByTo(destination: M, keySelector: (Long) -> K): M {\n
for (element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n
* Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function applied to each element of the given array\n * and value is the element itself.\n * \n * If any
two elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n *
@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Float>> FloatArray.associateByTo(destination: M, keySelector: (Float) -> K): M {\n  for
(element in this) {\n    destination.put(keySelector(element), element)\n  }\n  return destination\n}\n\n/**\n
* Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the

```

[keySelector] function applied to each element of the given array and value is the element itself. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo
public inline fun <K, M : MutableMap<in K, in Double>> DoubleArray.associateByTo(destination: M, keySelector: (Double) -> K): M {
    for (element in this) {
        destination.put(keySelector(element), element)
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function applied to each element of the given array and value is the element itself. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo
public inline fun <K, M : MutableMap<in K, in Boolean>> BooleanArray.associateByTo(destination: M, keySelector: (Boolean) -> K): M {
    for (element in this) {
        destination.put(keySelector(element), element)
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function applied to each element of the given array and value is the element itself. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByTo
public inline fun <K, M : MutableMap<in K, in Char>> CharArray.associateByTo(destination: M, keySelector: (Char) -> K): M {
    for (element in this) {
        destination.put(keySelector(element), element)
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function and value is provided by the [valueTransform] function applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
public inline fun <T, K, V, M : MutableMap<in K, in V>> Array<out T>.associateByTo(destination: M, keySelector: (T) -> K, valueTransform: (T) -> V): M {
    for (element in this) {
        destination.put(keySelector(element), valueTransform(element))
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function and value is provided by the [valueTransform] function applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
public inline fun <K, V, M : MutableMap<in K, in V>> ByteArray.associateByTo(destination: M, keySelector: (Byte) -> K, valueTransform: (Byte) -> V): M {
    for (element in this) {
        destination.put(keySelector(element), valueTransform(element))
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function and value is provided by the [valueTransform] function applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
public inline fun <K, V, M : MutableMap<in K, in V>> ShortArray.associateByTo(destination: M, keySelector: (Short) -> K, valueTransform: (Short) -> V): M {
    for (element in this) {
        destination.put(keySelector(element), valueTransform(element))
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function and value is provided by the [valueTransform] function applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

@sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform
public inline fun <K, V, M : MutableMap<in K, in V>> IntArray.associateByTo(destination: M, keySelector: (Int) -> K, valueTransform: (Int) -> V): M {
    for (element in this) {
        destination.put(keySelector(element), valueTransform(element))
    }
    return destination
}

```

Populates and returns the [destination] mutable map with key-value pairs, where key is provided by the [keySelector] function and value is provided by the [valueTransform] function applied to elements of the given array. If any two elements would have the same key returned by [keySelector] the last one gets added to the map.

```

same key returned by [keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateByTo(destination: M, keySelector: (Long) ->
K, valueTransform: (Long) -> V): M {\n for (element in this) {\n destination.put(keySelector(element),
valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by
the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> FloatArray.associateByTo(destination: M, keySelector: (Float) ->
K, valueTransform: (Float) -> V): M {\n for (element in this) {\n destination.put(keySelector(element),
valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and value is provided by
the [valueTransform] function applied to elements of the given array.\n * \n * If any two elements would have the
same key returned by [keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateByTo(destination: M, keySelector:
(Double) -> K, valueTransform: (Double) -> V): M {\n for (element in this) {\n
destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector]
function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *
\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *
\n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n
*/\npublic inline fun <K, V, M : MutableMap<in K, in V>> BooleanArray.associateByTo(destination: M,
keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): M {\n for (element in this) {\n
destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector]
function and\n * and value is provided by the [valueTransform] function applied to elements of the given array.\n *
\n * If any two elements would have the same key returned by [keySelector] the last one gets added to the map.\n *
\n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesByToWithValueTransform\n
*/\npublic inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateByTo(destination: M, keySelector:
(Char) -> K, valueTransform: (Char) -> V): M {\n for (element in this) {\n
destination.put(keySelector(element), valueTransform(element))\n }\n return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic
inline fun <T, K, V, M : MutableMap<in K, in V>> Array<out T>.associateTo(destination: M, transform: (T) ->
Pair<K, V>): M {\n for (element in this) {\n destination += transform(element)\n }\n return
destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by
[transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic inline fun <K, V, M :
MutableMap<in K, in V>> ByteArray.associateTo(destination: M, transform: (Byte) -> Pair<K, V>): M {\n for
(element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> ShortArray.associateTo(destination: M, transform: (Short) ->

```

```

Pair<K, V>: M { \n  for (element in this) { \n    destination += transform(element)\n  } \n  return
destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by
[transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic inline fun <K, V, M :
MutableMap<in K, in V>> IntArray.associateTo(destination: M, transform: (Int) -> Pair<K, V>): M { \n  for
(element in this) { \n    destination += transform(element)\n  } \n  return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> LongArray.associateTo(destination: M, transform: (Long) ->
Pair<K, V>): M { \n  for (element in this) { \n    destination += transform(element)\n  } \n  return
destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by
[transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic inline fun <K, V, M :
MutableMap<in K, in V>> FloatArray.associateTo(destination: M, transform: (Float) -> Pair<K, V>): M { \n  for
(element in this) { \n    destination += transform(element)\n  } \n  return destination\n}\n\n/**\n * Populates and
returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> DoubleArray.associateTo(destination: M, transform: (Double) ->
Pair<K, V>): M { \n  for (element in this) { \n    destination += transform(element)\n  } \n  return
destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs\n * provided by
[transform] function applied to each element of the given array.\n * \n * If any of two pairs would have the same key
the last one gets added to the map.\n * \n * @sample
samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic inline fun <K, V, M :
MutableMap<in K, in V>> BooleanArray.associateTo(destination: M, transform: (Boolean) -> Pair<K, V>): M { \n
for (element in this) { \n    destination += transform(element)\n  } \n  return destination\n}\n\n/**\n * Populates
and returns the [destination] mutable map with key-value pairs\n * provided by [transform] function applied to each
element of the given array.\n * \n * If any of two pairs would have the same key the last one gets added to the
map.\n * \n * @sample samples.collections.Arrays.Transformations.associateArrayOfPrimitivesTo\n */\npublic
inline fun <K, V, M : MutableMap<in K, in V>> CharArray.associateTo(destination: M, transform: (Char) ->
Pair<K, V>): M { \n  for (element in this) { \n    destination += transform(element)\n  } \n  return
destination\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced
by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets
added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n *
@sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\npublic inline
fun <K, V> Array<out K>.associateWith(valueSelector: (K) -> V): Map<K, V> { \n  val result =
LinkedHashMap<K, V>(mapCapacity(size).coerceAtLeast(16))\n  return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n *
produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one
gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n *
@sample samples.collections.Collections.Transformations.associateWith\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
ByteArray.associateWith(valueSelector: (Byte) -> V): Map<Byte, V> { \n  val result = LinkedHashMap<Byte,
V>(mapCapacity(size).coerceAtLeast(16))\n  return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function

```

applied to each element.\n \* \n \* If any two elements are equal, the last one gets added to the map.\n \* \n \* The returned map preserves the entry iteration order of the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.associateWith\n

```

*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
ShortArray.associateWith(valueSelector: (Short) -> V): Map<Short, V> {\n    val result = LinkedHashMap<Short, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
IntArray.associateWith(valueSelector: (Int) -> V): Map<Int, V> {\n    val result = LinkedHashMap<Int, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
LongArray.associateWith(valueSelector: (Long) -> V): Map<Long, V> {\n    val result = LinkedHashMap<Long, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
FloatArray.associateWith(valueSelector: (Float) -> V): Map<Float, V> {\n    val result = LinkedHashMap<Float, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
DoubleArray.associateWith(valueSelector: (Double) -> V): Map<Double, V> {\n    val result = LinkedHashMap<Double, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
BooleanArray.associateWith(valueSelector: (Boolean) -> V): Map<Boolean, V> {\n    val result = LinkedHashMap<Boolean, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n */\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V>
CharArray.associateWith(valueSelector: (Char) -> V): Map<Char, V> {\n    val result = LinkedHashMap<Char, V>(mapCapacity(size).coerceAtMost(128)).coerceAtLeast(16)\n    return associateWithTo(result,

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valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each
element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function
applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n *
 * @sample samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\npublic
inline fun <K, V, M : MutableMap<in K, in V>> Array<out K>.associateWithTo(destination: M, valueSelector: (K)
-> V): M {\n  for (element in this) {\n    destination.put(element, valueSelector(element))\n  }\n  return
destination}\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element
of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied
to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n *
 * @sample samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Byte, in V>>
ByteArray.associateWithTo(destination: M, valueSelector: (Byte) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element
itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are
equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Short, in V>>
ShortArray.associateWithTo(destination: M, valueSelector: (Short) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element
itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are
equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Int, in V>>
IntArray.associateWithTo(destination: M, valueSelector: (Int) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element
itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are
equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Long, in V>>
LongArray.associateWithTo(destination: M, valueSelector: (Long) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element
itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are
equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Float, in V>>
FloatArray.associateWithTo(destination: M, valueSelector: (Float) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element
itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are
equal, the last one overwrites the former value in the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n * \n @SinceKotlin("1.4")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <V, M : MutableMap<in Double, in V>>
DoubleArray.associateWithTo(destination: M, valueSelector: (Double) -> V): M {\n  for (element in this) {\n
  destination.put(element, valueSelector(element))\n  }\n  return destination}\n}\n\n/**\n * Populates and returns the

```

[destination] mutable map with key-value pairs for each element of the given array, \n \* where key is the element itself and value is provided by the [valueSelector] function applied to that key. \n \* \n \* If any two elements are equal, the last one overwrites the former value in the map. \n \* \n \* @sample samples.collections.Collections.Transformations.associateWithTo

```

*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Boolean, in V>> BooleanArray.associateWithTo(destination: M, valueSelector: (Boolean) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/>\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array, \n * where key is the element itself and value is provided by the [valueSelector] function applied to that key. \n * \n * If any two elements are equal, the last one overwrites the former value in the map. \n * \n * @sample samples.collections.Collections.Transformations.associateWithTo
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in Char, in V>> CharArray.associateWithTo(destination: M, valueSelector: (Char) -> V): M {\n    for (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <T, C : MutableCollection<in T>> Array<out T>.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Byte>> ByteArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Short>> ShortArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Int>> IntArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Long>> LongArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Float>> FloatArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Double>> DoubleArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Boolean>> BooleanArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Appends all elements to the given [destination] collection. \n *\npublic fun <C : MutableCollection<in Char>> CharArray.toCollection(destination: C): C {\n    for (item in this) {\n        destination.add(item)\n    }\n    return destination\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun <T> Array<out T>.toHashSet(): HashSet<T> {\n    return toCollection(HashSet<T>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun ByteArray.toHashSet(): HashSet<Byte> {\n    return toCollection(HashSet<Byte>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun ShortArray.toHashSet(): HashSet<Short> {\n    return toCollection(HashSet<Short>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun IntArray.toHashSet(): HashSet<Int> {\n    return toCollection(HashSet<Int>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun LongArray.toHashSet(): HashSet<Long> {\n    return toCollection(HashSet<Long>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun FloatArray.toHashSet(): HashSet<Float> {\n    return toCollection(HashSet<Float>(mapCapacity(size)))\n}\n\n/>\n * Returns a new [HashSet] of all elements. \n *\npublic fun DoubleArray.toHashSet(): HashSet<Double> {\n    return

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toCollection(HashSet<Double>(mapCapacity(size)))\n\n\n * Returns a new [HashSet] of all elements.\n
*\npublic fun BooleanArray.toHashSet(): HashSet<Boolean> {\n    return
toCollection(HashSet<Boolean>(mapCapacity(size)))\n\n\n * Returns a new [HashSet] of all elements.\n
*\npublic fun CharArray.toHashSet(): HashSet<Char> {\n    return
toCollection(HashSet<Char>(mapCapacity(size.coerceAtMost(128))))\n\n\n * Returns a [List] containing all
elements.\n * \npublic fun <T> Array<out T>.toList(): List<T> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all
elements.\n * \npublic fun ByteArray.toList(): List<Byte> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun ShortArray.toList(): List<Short> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun IntArray.toList(): List<Int> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun LongArray.toList(): List<Long> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun FloatArray.toList(): List<Float> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun DoubleArray.toList(): List<Double> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun BooleanArray.toList(): List<Boolean> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a [List] containing all elements.\n
*\npublic fun CharArray.toList(): List<Char> {\n    return when (size) {\n        0 -> emptyList()\n
        1 -> listOf(this[0])\n        else -> this.toMutableList()\n    }\n\n\n * Returns a new [MutableList] filled with all
elements of this array.\n * \npublic fun <T> Array<out T>.toMutableList(): MutableList<T> {\n    return
ArrayList(this.asCollection())\n\n\n * Returns a new [MutableList] filled with all elements of this array.\n
*\npublic fun ByteArray.toMutableList(): MutableList<Byte> {\n    val list = ArrayList<Byte>(size)\n    for (item
in this) list.add(item)\n    return list\n\n\n * Returns a new [MutableList] filled with all elements of this
array.\n * \npublic fun ShortArray.toMutableList(): MutableList<Short> {\n    val list = ArrayList<Short>(size)\n
for (item in this) list.add(item)\n    return list\n\n\n * Returns a new [MutableList] filled with all elements of
this array.\n * \npublic fun IntArray.toMutableList(): MutableList<Int> {\n    val list = ArrayList<Int>(size)\n
for (item in this) list.add(item)\n    return list\n\n\n * Returns a new [MutableList] filled with all elements of this
array.\n * \npublic fun LongArray.toMutableList(): MutableList<Long> {\n    val list = ArrayList<Long>(size)\n
for (item in this) list.add(item)\n    return list\n\n\n * Returns a new [MutableList] filled with all elements of
this array.\n * \npublic fun FloatArray.toMutableList(): MutableList<Float> {\n    val list =
ArrayList<Float>(size)\n    for (item in this) list.add(item)\n    return list\n\n\n * Returns a new [MutableList]
filled with all elements of this array.\n * \npublic fun DoubleArray.toMutableList(): MutableList<Double> {\n    val
list = ArrayList<Double>(size)\n    for (item in this) list.add(item)\n    return list\n\n\n * Returns a new
[MutableList] filled with all elements of this array.\n * \npublic fun BooleanArray.toMutableList():
MutableList<Boolean> {\n    val list = ArrayList<Boolean>(size)\n    for (item in this) list.add(item)\n    return
list\n\n\n * Returns a new [MutableList] filled with all elements of this array.\n * \npublic fun
CharArray.toMutableList(): MutableList<Char> {\n    val list = ArrayList<Char>(size)\n    for (item in this)
list.add(item)\n    return list\n\n\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the
element iteration order of the original array.\n * \npublic fun <T> Array<out T>.toSet(): Set<T> {\n    return when
(size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<T>(mapCapacity(size)))\n    }\n\n\n * Returns a [Set] of all elements.\n * \n *
The returned set preserves the element iteration order of the original array.\n * \npublic fun ByteArray.toSet():
Set<Byte> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Byte>(mapCapacity(size)))\n    }\n\n\n * Returns a [Set] of all elements.\n * \n * \n *

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The returned set preserves the element iteration order of the original array.\n */\npublic fun ShortArray.toSet():
Set<Short> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Short>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun IntArray.toSet():
Set<Int> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Int>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun LongArray.toSet():
Set<Long> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Long>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun FloatArray.toSet():
Set<Float> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Float>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun DoubleArray.toSet():
Set<Double> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else ->
toCollection(LinkedHashSet<Double>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun
BooleanArray.toSet(): Set<Boolean> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -> toCollection(LinkedHashSet<Boolean>(mapCapacity(size)))\n    }\n}\n\n/**\n * Returns a [Set] of all
elements.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun
CharArray.toSet(): Set<Char> {\n    return when (size) {\n        0 -> emptySet()\n        1 -> setOf(this[0])\n        else -
-> toCollection(LinkedHashSet<Char>(mapCapacity(size.coerceAtMost(128))))\n    }\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element of original array.\n *
\n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <T, R> Array<out
T>.flatMap(transform: (T) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on each element of
original array.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun
<R> ByteArray.flatMap(transform: (Byte) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> ShortArray.flatMap(transform:
(Short) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element of original array.\n *
\n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>
IntArray.flatMap(transform: (Int) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R> LongArray.flatMap(transform:
(Long) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element of original array.\n *
\n * @sample samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>
FloatArray.flatMap(transform: (Float) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>
DoubleArray.flatMap(transform: (Double) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n */\npublic inline fun <R>

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BooleanArray.flatMap(transform: (Boolean) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*/\n\npublic inline fun <R> CharArray.flatMap(transform:
(Char) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single
list of all elements yielded from results of [transform] function being invoked on each element of original array.\n *
\n * @sample samples.collections.Collections.Transformations.flatMap\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequence")\npublic inline fun <T, R> Array<out
T>.flatMap(transform: (T) -> Sequence<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> Array<out T>.flatMapIndexed(transform: (index: Int, T) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> ByteArray.flatMapIndexed(transform: (index: Int, Byte) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> ShortArray.flatMapIndexed(transform: (index: Int, Short) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> IntArray.flatMapIndexed(transform: (index: Int, Int) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> LongArray.flatMapIndexed(transform: (index: Int, Long) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
\n * @sample samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> FloatArray.flatMapIndexed(transform: (index: Int, Float) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *

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@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> DoubleArray.flatMapIndexed(transform: (index: Int, Double) -> Iterable<R>): List<R> {\n return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> BooleanArray.flatMapIndexed(transform: (index: Int, Boolean) -> Iterable<R>): List<R> {\n
return flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded
from results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\n@kotlin.internal.InlineOnly\npublic
inline fun <R> CharArray.flatMapIndexed(transform: (index: Int, Char) -> Iterable<R>): List<R> {\n return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequence")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R> Array<out T>.flatMapIndexed(transform: (index: Int, T) -> Sequence<R>): List<R> {\n return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic
inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic
inline fun <R, C : MutableCollection<in R>> ByteArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Byte) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic
inline fun <R, C : MutableCollection<in R>> ShortArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Short) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npublic

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c inline fun <R, C : MutableCollection<in R>> IntArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Int) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++, element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> LongArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Long) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++,
element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> FloatArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Float) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++,
element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> DoubleArray.flatMapIndexedTo(destination: C, transform: (index:
Int, Double) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++,
element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> BooleanArray.flatMapIndexedTo(destination: C, transform: (index:
Int, Boolean) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++,
element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <R, C : MutableCollection<in R>> CharArray.flatMapIndexedTo(destination: C, transform: (index: Int,
Char) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++,
element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedSequenceTo")\n@kotlin.internal.InlineOnly\npub
public inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Sequence<R>): C {\n  var index = 0\n  for (element in this) {\n    val list =
transform(index++, element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all
elements yielded from results of [transform] function being invoked on each element of original array, to the given
[destination].\n
*\n@public inline fun <T, R, C : MutableCollection<in R>> Array<out T>.flatMapTo(destination: C,
transform: (T) -> Iterable<R>): C {\n  for (element in this) {\n    val list = transform(element)\n

```



given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> ShortArray.groupBy(keySelector: (Short) -> K): Map<K, List<Short>> {\n return groupByTo(LinkedHashMap<K, MutableList<Short>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> IntArray.groupBy(keySelector: (Int) -> K): Map<K, List<Int>> {\n return groupByTo(LinkedHashMap<K, MutableList<Int>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> LongArray.groupBy(keySelector: (Long) -> K): Map<K, List<Long>> {\n return groupByTo(LinkedHashMap<K, MutableList<Long>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> FloatArray.groupBy(keySelector: (Float) -> K): Map<K, List<Float>> {\n return groupByTo(LinkedHashMap<K, MutableList<Float>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> DoubleArray.groupBy(keySelector: (Double) -> K): Map<K, List<Double>> {\n return groupByTo(LinkedHashMap<K, MutableList<Double>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> BooleanArray.groupBy(keySelector: (Boolean) -> K): Map<K, List<Boolean>> {\n return groupByTo(LinkedHashMap<K, MutableList<Boolean>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupBy\n \*/\npublic inline fun <K> CharArray.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n return groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n \*/\npublic inline fun <T, K, V> Array<out T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \* \n \* The returned map preserves the entry iteration order of the keys

```

produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
ByteArray.groupBy(keySelector: (Byte) -> K, valueTransform: (Byte) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
ShortArray.groupBy(keySelector: (Short) -> K, valueTransform: (Short) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
IntArray.groupBy(keySelector: (Int) -> K, valueTransform: (Int) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
LongArray.groupBy(keySelector: (Long) -> K, valueTransform: (Long) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
FloatArray.groupBy(keySelector: (Float) -> K, valueTransform: (Float) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups values
returned by the [valueTransform] function applied to each element of the original array\n * by the key returned by
the given [keySelector] function applied to the element\n * and returns a map where each group key is associated
with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys
produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
DoubleArray.groupBy(keySelector: (Double) -> K, valueTransform: (Double) -> V): Map<K, List<V>> {\n
return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups
values returned by the [valueTransform] function applied to each element of the original array\n * by the key
returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is
associated with a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the
keys produced from the original array.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \npublic inline fun <K, V>
BooleanArray.groupBy(keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): Map<K, List<V>> {\n
return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups
values returned by the [valueTransform] function applied to each element of the original array\n * by the key
returned by the given [keySelector] function applied to the element\n * and returns a map where each group key is

```

associated with a list of corresponding values. The returned map preserves the entry iteration order of the keys produced from the original array.

`@sample`

```

samples.collections.Collections.Transformations.groupByKeyAndValues
public inline fun <K, V>
CharArray.groupBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, List<V>> {
    return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <T, K, M : MutableMap<in K, MutableList<T>>> Array<out T>.groupByTo(destination: M, keySelector: (T) -
> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key)
        { ArrayList<T>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Byte>>> ByteArray.groupByTo(destination: M, keySelector: (Byte) -
> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key)
        { ArrayList<Byte>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Short>>> ShortArray.groupByTo(destination: M, keySelector: (Short)
-> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list =
destination.getOrPut(key) { ArrayList<Short>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Int>>> IntArray.groupByTo(destination: M,
keySelector: (Int) -> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list =
destination.getOrPut(key) { ArrayList<Int>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Long>>> LongArray.groupByTo(destination: M,
keySelector: (Long) -> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list =
destination.getOrPut(key) { ArrayList<Long>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Float>>> FloatArray.groupByTo(destination: M,
keySelector: (Float) -> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list =
destination.getOrPut(key) { ArrayList<Float>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.

`@return` The [destination] map.

`@sample`

```

samples.collections.Collections.Transformations.groupBy
public inline
fun <K, M : MutableMap<in K, MutableList<Double>>> DoubleArray.groupByTo(destination: M,
keySelector: (Double) -> K): M {
    for (element in this) {
        val key = keySelector(element)
        val list =
destination.getOrPut(key) { ArrayList<Double>() }
        list.add(element)
    }
    return destination
}

```

Groups elements of the original array by the key returned by the given [keySelector] function applied to each

```

element and puts to the [destination] map each group key associated with a list of corresponding elements.\n * \n *
@return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*/\npublic inline fun <K, M : MutableMap<in K, MutableList<Boolean>>> BooleanArray.groupByTo(destination:
M, keySelector: (Boolean) -> K): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list
= destination.getOrPut(key) { ArrayList<Boolean>() }\n        list.add(element)\n    }\n    return
destination\n}\n\n/**\n * Groups elements of the original array by the key returned by the given [keySelector]
function\n * applied to each element and puts to the [destination] map each group key associated with a list of
corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n
*/\npublic inline fun <K, M : MutableMap<in K, MutableList<Char>>> CharArray.groupByTo(destination: M, keySelector: (Char) -> K): M {\n    for (element in
this) {\n        val key = keySelector(element)\n        val list = destination.getOrPut(key) { ArrayList<Char>() }\n
list.add(element)\n    }\n    return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function
applied to each element of the original array\n * by the key returned by the given [keySelector] function applied to
the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n *
\n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\npublic inline fun <T, K, V, M : MutableMap<in K, MutableList<V>>> Array<out T>.groupByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n        val list =
destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\npublic
inline fun <K, V, M : MutableMap<in K, MutableList<V>>> ByteArray.groupByTo(destination: M, keySelector:
(Byte) -> K, valueTransform: (Byte) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n
val list = destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\npublic
inline fun <K, V, M : MutableMap<in K, MutableList<V>>> ShortArray.groupByTo(destination: M, keySelector:
(Short) -> K, valueTransform: (Short) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n
val list = destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\npublic
inline fun <K, V, M : MutableMap<in K, MutableList<V>>> IntArray.groupByTo(destination: M, keySelector:
(Int) -> K, valueTransform: (Int) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n
val list = destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the
original array\n * by the key returned by the given [keySelector] function applied to the element\n * and puts to the
[destination] map each group key associated with a list of corresponding values.\n * \n * @return The [destination]
map.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*/\npublic
inline fun <K, V, M : MutableMap<in K, MutableList<V>>> LongArray.groupByTo(destination: M, keySelector:
(Long) -> K, valueTransform: (Long) -> V): M {\n    for (element in this) {\n        val key = keySelector(element)\n
val list = destination.getOrPut(key) { ArrayList<V>() }\n        list.add(valueTransform(element))\n    }\n    return
destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function applied to each element of the

```

original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> FloatArray.groupByTo(destination: M, keySelector: (Float) -> K, valueTransform: (Float) -> V): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) { ArrayList<V>() }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> DoubleArray.groupByTo(destination: M, keySelector: (Double) -> K, valueTransform: (Double) -> V): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) { ArrayList<V>() }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> BooleanArray.groupByTo(destination: M, keySelector: (Boolean) -> K, valueTransform: (Boolean) -> V): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) { ArrayList<V>() }
        list.add(valueTransform(element))
    }
    return destination
}

```

Groups values returned by the [valueTransform] function applied to each element of the original array by the key returned by the given [keySelector] function applied to the element and puts to the [destination] map each group key associated with a list of corresponding values. @return The [destination] map. @sample samples.collections.Collections.Transformations.groupByKeyAndValues

```

public inline fun <K, V, M : MutableMap<in K, MutableList<V>>> CharArray.groupByTo(destination: M, keySelector: (Char) -> K, valueTransform: (Char) -> V): M {
    for (element in this) {
        val key = keySelector(element)
        val list = destination.getOrPut(key) { ArrayList<V>() }
        list.add(valueTransform(element))
    }
    return destination
}

```

Creates a [Grouping] source from an array to be used later with one of group-and-fold operations using the specified [keySelector] function to extract a key from each element. @sample samples.collections.Grouping.groupingByEachCount

```

@SinceKotlin("1.1")
public inline fun <T, K> Array<out T>.groupingBy(crossinline keySelector: (T) -> K): Grouping<T, K> {
    return object : Grouping<T, K> {
        override fun sourceIterator(): Iterator<T> = this@groupingBy.iterator()
        override fun keyOf(element: T): K = keySelector(element)
    }
}

```

Returns a list containing the results of applying the given [transform] function to each element in the original array. @sample samples.collections.Collections.Transformations.map

```

public inline fun <T, R> Array<out T>.map(transform: (T) -> R): List<R> {
    return mapTo(ArrayList<R>(size), transform)
}

```

Returns a list containing the results of applying the given [transform] function to each element in the original array. @sample samples.collections.Collections.Transformations.map

```

public inline fun <R> ByteArray.map(transform: (Byte) -> R): List<R> {
    return mapTo(ArrayList<R>(size), transform)
}

```

Returns a list containing the results of applying the given [transform] function to each element in the original array. @sample samples.collections.Collections.Transformations.map

```

public inline fun <R> ShortArray.map(transform: (Short) -> R): List<R> {
    return mapTo(ArrayList<R>(size), transform)
}

```

Returns a list containing the results of applying the given [transform] function to each element in the original array. @sample samples.collections.Collections.Transformations.map

```

public inline fun <R> IntArray.map(transform: (Int) -> R): List<R> {
    return mapTo(ArrayList<R>(size), transform)
}

```

Returns a list containing the results of applying the given [transform] function to each element in the original array. @sample samples.collections.Collections.Transformations.map

```

public inline fun <R> LongArray.map(transform:

```

(Long) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.map\n \*/\npublic inline fun <R> FloatArray.map(transform: (Float) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.map\n \*/\npublic inline fun <R> DoubleArray.map(transform: (Double) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element in the original array.\n \* \n \* @sample samples.collections.Collections.Transformations.map\n \*/\npublic inline fun <R> BooleanArray.map(transform: (Boolean) -> R): List<R> {\n return mapTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <T, R> Array<out T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> ShortArray.mapIndexed(transform: (index: Int, Short) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> IntArray.mapIndexed(transform: (index: Int, Int) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> LongArray.mapIndexed(transform: (index: Int, Long) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> FloatArray.mapIndexed(transform: (index: Int, Float) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> DoubleArray.mapIndexed(transform: (index: Int, Double) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R> BooleanArray.mapIndexed(transform: (index: Int, Boolean) -> R): List<R> {\n return mapIndexedTo(ArrayList<R>(size), transform)\n}\n\n/\*\*\n \* Returns a list containing the results of applying the given [transform] function\n \* to each element and its index in the original array.\n \* \n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\n

returns the result of the transform applied to the element.

```

public inline fun <R>
CharArray.mapIndexed(transform: (index: Int, Char) -> R): List<R> {
    return
    mapIndexedTo(ArrayList<R>(size), transform)
}

```

\* Returns a list containing only the non-null results of applying the given [transform] function to each element and its index in the original array.

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <T, R : Any> Array<out T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {
    return
    mapIndexedNotNullTo(ArrayList<R>(), transform)
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends only the non-null results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <T, R : Any, C : MutableCollection<in R>> Array<out T>.mapIndexedNotNullTo(destination: C, transform: (index: Int, T) -> R?): C {
    forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <T, R, C : MutableCollection<in R>> Array<out T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> ByteArray.mapIndexedTo(destination: C, transform: (index: Int, Byte) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> ShortArray.mapIndexedTo(destination: C, transform: (index: Int, Short) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> IntArray.mapIndexedTo(destination: C, transform: (index: Int, Int) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> LongArray.mapIndexedTo(destination: C, transform: (index: Int, Long) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> FloatArray.mapIndexedTo(destination: C, transform: (index: Int, Float) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

```

public inline fun <R, C : MutableCollection<in R>> DoubleArray.mapIndexedTo(destination: C, transform: (index: Int, Double) -> R): C {
    var index = 0
    for (item in this)
        destination.add(transform(index++, item))
    return destination
}

```

\* Applies the given [transform] function to each element and its index in the original array and appends the results to the given [destination].

@param [transform] function that takes the index of an element and the element itself and returns the result of the transform applied to the element.

[transform] function to each element and its index in the original array\n \* and appends the results to the given [destination].\n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.mapIndexedTo(destination: C, transform: (index: Int, Boolean) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element and its index in the original array\n \* and appends the results to the given [destination].\n \* @param [transform] function that takes the index of an element and the element itself\n \* and returns the result of the transform applied to the element.\n \*/\npublic inline fun <R, C : MutableCollection<in R>> CharArray.mapIndexedTo(destination: C, transform: (index: Int, Char) -> R): C {\n var index = 0\n for (item in this)\n destination.add(transform(index++, item))\n return destination\n}\n\n/\*\*\n \* Returns a list containing only the non-null results of applying the given [transform] function\n \* to each element in the original array.\n \*/\n \* @sample samples.collections.Collections.Transformations.mapNotNull\n \*/\npublic inline fun <T, R : Any> Array<out T>.mapNotNull(transform: (T) -> R?): List<R> {\n return mapNotNullTo(ArrayList<R>(), transform)\n}\n\n/\*\*\n \* Applies the given [transform] function to each element in the original array\n \* and appends only the non-null results to the given [destination].\n \*/\npublic inline fun <T, R : Any, C : MutableCollection<in R>> Array<out T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n for (element in this)\n destination.add(transform(element)?.let { destination.add(it) })\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <T, R, C : MutableCollection<in R>> Array<out T>.mapTo(destination: C, transform: (T) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> ByteArray.mapTo(destination: C, transform: (Byte) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> ShortArray.mapTo(destination: C, transform: (Short) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> IntArray.mapTo(destination: C, transform: (Int) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> LongArray.mapTo(destination: C, transform: (Long) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> FloatArray.mapTo(destination: C, transform: (Float) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> DoubleArray.mapTo(destination: C, transform: (Double) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> BooleanArray.mapTo(destination: C, transform: (Boolean) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Applies the given [transform] function to each element of the original array\n \* and appends the results to the given [destination].\n \*/\npublic inline fun <R, C : MutableCollection<in R>> CharArray.mapTo(destination: C, transform: (Char) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return destination\n}\n\n/\*\*\n \* Returns a lazy [Iterable] that wraps each element of the original array\n \* into an [IndexedValue] containing the index of that element and the element itself.\n \*/\npublic fun <T> Array<out T>.withIndex(): Iterable<IndexedValue<T>> {\n return IndexingIterable { iterator() }\n}\n\n/\*\*\n \* Returns a

lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun ByteArray.withIndex(): Iterable<IndexedValue<Byte>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun ShortArray.withIndex(): Iterable<IndexedValue<Short>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun IntArray.withIndex(): Iterable<IndexedValue<Int>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun LongArray.withIndex(): Iterable<IndexedValue<Long>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun FloatArray.withIndex(): Iterable<IndexedValue<Float>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun DoubleArray.withIndex(): Iterable<IndexedValue<Double>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun BooleanArray.withIndex(): Iterable<IndexedValue<Boolean>> {
    return IndexingIterable { iterator() }
}

```

Returns a lazy [Iterable] that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

public fun CharArray.withIndex(): Iterable<IndexedValue<Char>> {
    return IndexingIterable { iterator() }
}

```

Returns a list containing only distinct elements from the given array.

Among equal elements of the given array, only the first one will be present in the resulting list.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun <T> Array<out T>.distinct(): List<T> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun ByteArray.distinct(): List<Byte> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun ShortArray.distinct(): List<Short> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun IntArray.distinct(): List<Int> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun LongArray.distinct(): List<Long> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample
samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun FloatArray.distinct(): List<Float> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample samples.collections.Collections.Transformations.distinctAndDistinctBy
public fun DoubleArray.distinct(): List<Double> {
    return this.toMutableSet().toList()
}

```

Returns a list containing only distinct elements from the given array.

The elements in the resulting list are in the same order as they were in the source array.

```

@sample

```

```

samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic fun BooleanArray.distinct():
List<Boolean> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing only distinct
elements from the given array.\n * \n * The elements in the resulting list are in the same order as they were in the
source array.\n * \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic
fun CharArray.distinct(): List<Char> {\n    return this.toMutableSet().toList()\n}\n\n/**\n * Returns a list containing
only elements from the given array\n * having distinct keys returned by the given [selector] function.\n * \n *
Among elements of the given array with equal keys, only the first one will be present in the resulting list.\n * The
elements in the resulting list are in the same order as they were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <T, K> Array<out
T>.distinctBy(selector: (T) -> K): List<T> {\n    val set = HashSet<K>()\n    val list = ArrayList<T>()\n    for (e in
this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n *
Returns a list containing only elements from the given array\n * having distinct keys returned by the given [selector]
function.\n * \n * The elements in the resulting list are in the same order as they were in the source array.\n * \n *
@sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
ByteArray.distinctBy(selector: (Byte) -> K): List<Byte> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Byte>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n
return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
ShortArray.distinctBy(selector: (Short) -> K): List<Short> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Short>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n
return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
IntArray.distinctBy(selector: (Int) -> K): List<Int> {\n    val set = HashSet<K>()\n    val list = ArrayList<Int>()\n
for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n *
Returns a list containing only elements from the given array\n * having distinct keys returned by the given
[selector] function.\n * \n * The elements in the resulting list are in the same order as they were in the source
array.\n * \n * @sample samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline
fun <K> LongArray.distinctBy(selector: (Long) -> K): List<Long> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Long>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n
return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
FloatArray.distinctBy(selector: (Float) -> K): List<Float> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Float>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n
return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n *^\npublic inline fun <K>
DoubleArray.distinctBy(selector: (Double) -> K): List<Double> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Double>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n
return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample

```

```

samples.collections.Collections.Transformations.distinctAndDistinctBy\n */\npublic inline fun <K>
BooleanArray.distinctBy(selector: (Boolean) -> K): List<Boolean> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Boolean>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n * Returns a list containing only elements from the given array\n * having distinct keys
returned by the given [selector] function.\n * \n * The elements in the resulting list are in the same order as they
were in the source array.\n * \n * @sample
samples.collections.Collections.Transformations.distinctAndDistinctBy\n */\npublic inline fun <K>
CharArray.distinctBy(selector: (Char) -> K): List<Char> {\n    val set = HashSet<K>()\n    val list =
ArrayList<Char>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}\n\n/**\n * Returns a set containing all elements that are contained by both this array and the specified
collection.\n * \n * The returned set preserves the element iteration order of the original array.\n * \n * To get a set
containing all elements that are contained at least in one of these collections use [union].\n */\npublic infix fun <T>
Array<out T>.intersect(other: Iterable<T>): Set<T> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this array and the specified
collection.\n * \n * The returned set preserves the element iteration order of the original array.\n * \n * To get a set
containing all elements that are contained at least in one of these collections use [union].\n */\npublic infix fun
ByteArray.intersect(other: Iterable<Byte>): Set<Byte> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this array and the specified
collection.\n * \n * The returned set preserves the element iteration order of the original array.\n * \n * To get a set
containing all elements that are contained at least in one of these collections use [union].\n */\npublic infix fun
ShortArray.intersect(other: Iterable<Short>): Set<Short> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this
array and the specified collection.\n * \n * The returned set preserves the element iteration order of the original
array.\n * \n * To get a set containing all elements that are contained at least in one of these collections use
[union].\n */\npublic infix fun IntArray.intersect(other: Iterable<Int>): Set<Int> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are contained by both this
array and the specified collection.\n * \n * The returned set preserves the element iteration order of the original
array.\n * \n * To get a set containing all elements that are contained at least in one of these collections use
[union].\n */\npublic infix fun LongArray.intersect(other: Iterable<Long>): Set<Long> {\n    val set =
this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are
contained by both this array and the specified collection.\n * \n * The returned set preserves the element iteration
order of the original array.\n * \n * To get a set containing all elements that are contained at least in one of these
collections use [union].\n */\npublic infix fun FloatArray.intersect(other: Iterable<Float>): Set<Float> {\n    val set
= this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that
are contained by both this array and the specified collection.\n * \n * The returned set preserves the element iteration
order of the original array.\n * \n * To get a set containing all elements that are contained at least in one of these
collections use [union].\n */\npublic infix fun DoubleArray.intersect(other: Iterable<Double>): Set<Double> {\n    val
set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all
elements that are contained by both this array and the specified collection.\n * \n * The returned set preserves the
element iteration order of the original array.\n * \n * To get a set containing all elements that are contained at least
in one of these collections use [union].\n */\npublic infix fun BooleanArray.intersect(other: Iterable<Boolean>):
Set<Boolean> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set
containing all elements that are contained by both this array and the specified collection.\n * \n * The returned set
preserves the element iteration order of the original array.\n * \n * To get a set containing all elements that are
contained at least in one of these collections use [union].\n */\npublic infix fun CharArray.intersect(other:
Iterable<Char>): Set<Char> {\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified collection.\n *
\n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun <T>

```

```

Array<out T>.subtract(other: Iterable<T>): Set<T> {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by\n the specified collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun ByteArray.subtract(other: Iterable<Byte>): Set<Byte> {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that are contained by this\n array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of\n the original array.\n */\npublic infix fun ShortArray.subtract(other: Iterable<Short>): Set<Short> {\n  val set =\n this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that\n are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the\n element iteration order of the original array.\n */\npublic infix fun IntArray.subtract(other: Iterable<Int>): Set<Int>\n {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all\n elements that are contained by this array and not contained by the specified collection.\n * \n * The returned set\n preserves the element iteration order of the original array.\n */\npublic infix fun LongArray.subtract(other:\n Iterable<Long>): Set<Long> {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that are contained by this array and not contained by the specified\n collection.\n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic infix fun\n FloatArray.subtract(other: Iterable<Float>): Set<Float> {\n  val set = this.toMutableSet()\n\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that are contained by this\n array and not contained by the specified collection.\n * \n * The returned set preserves the element iteration order of\n the original array.\n */\npublic infix fun DoubleArray.subtract(other: Iterable<Double>): Set<Double> {\n  val set\n = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set containing all elements that\n are contained by this array and not contained by the specified collection.\n * \n * The returned set preserves the\n element iteration order of the original array.\n */\npublic infix fun BooleanArray.subtract(other: Iterable<Boolean>):\n Set<Boolean> {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n  return set}\n\n/**\n * Returns a set\n containing all elements that are contained by this array and not contained by the specified collection.\n * \n * The\n returned set preserves the element iteration order of the original array.\n */\npublic infix fun\n CharArray.subtract(other: Iterable<Char>): Set<Char> {\n  val set = this.toMutableSet()\n  set.removeAll(other)\n\n  return set}\n\n/**\n * Returns a new [MutableSet] containing all distinct elements from the given array.\n * \n * \n * The returned set preserves the element iteration order of the original array.\n */\npublic fun <T> Array<out\n T>.toMutableSet(): MutableSet<T> {\n  return toCollection(LinkedHashSet<T>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet] containing all distinct elements from the given array.\n * \n * The returned set\n preserves the element iteration order of the original array.\n */\npublic fun ByteArray.toMutableSet():\n MutableSet<Byte> {\n  return toCollection(LinkedHashSet<Byte>(mapCapacity(size)))}\n\n/**\n * Returns a\n new [MutableSet] containing all distinct elements from the given array.\n * \n * The returned set preserves the\n element iteration order of the original array.\n */\npublic fun ShortArray.toMutableSet(): MutableSet<Short> {\n\n  return toCollection(LinkedHashSet<Short>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet]\n containing all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order\n of the original array.\n */\npublic fun IntArray.toMutableSet(): MutableSet<Int> {\n  return\n toCollection(LinkedHashSet<Int>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet] containing all\n distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original\n array.\n */\npublic fun LongArray.toMutableSet(): MutableSet<Long> {\n  return\n toCollection(LinkedHashSet<Long>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet] containing all\n distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original\n array.\n */\npublic fun FloatArray.toMutableSet(): MutableSet<Float> {\n  return\n toCollection(LinkedHashSet<Float>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet] containing all\n distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the original\n array.\n */\npublic fun DoubleArray.toMutableSet(): MutableSet<Double> {\n  return\n toCollection(LinkedHashSet<Double>(mapCapacity(size)))}\n\n/**\n * Returns a new [MutableSet] containing

```

all distinct elements from the given array.

`\n * \n * The returned set preserves the element iteration order of the original array.`

```

\n */\npublic fun BooleanArray.toMutableSet(): MutableSet<Boolean> {\n    return
toCollection(LinkedHashSet<Boolean>(mapCapacity(size)))\n}\n\n/**\n * Returns a new [MutableSet] containing
all distinct elements from the given array.\n * \n * The returned set preserves the element iteration order of the
original array.\n */\npublic fun CharArray.toMutableSet(): MutableSet<Char> {\n    return
toCollection(LinkedHashSet<Char>(mapCapacity(size.coerceAtMost(128))))\n}\n\n/**\n * Returns a set containing
all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order of the
original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the order of
the [other] collection.\n * \n * To get a set containing all elements that are contained in both collections use
[intersect].\n */\npublic infix fun <T> Array<out T>.union(other: Iterable<T>): Set<T> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n *
\n * To get a set containing all elements that are contained in both collections use [intersect].\n */\npublic infix fun
ByteArray.union(other: Iterable<Byte>): Set<Byte> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n
return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set
preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are
unique are iterated in the end\n * in the order of the [other] collection.\n * \n * To get a set containing all elements
that are contained in both collections use [intersect].\n */\npublic infix fun ShortArray.union(other:
Iterable<Short>): Set<Short> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n *
Returns a set containing all distinct elements from both collections.\n * \n * The returned set preserves the element
iteration order of the original array.\n * Those elements of the [other] collection that are unique are iterated in the
end\n * in the order of the [other] collection.\n * \n * To get a set containing all elements that are contained in both
collections use [intersect].\n */\npublic infix fun IntArray.union(other: Iterable<Int>): Set<Int> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n *
\n * To get a set containing all elements that are contained in both collections use [intersect].\n */\npublic infix fun
LongArray.union(other: Iterable<Long>): Set<Long> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n
return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set
preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are
unique are iterated in the end\n * in the order of the [other] collection.\n * \n * To get a set containing all elements
that are contained in both collections use [intersect].\n */\npublic infix fun FloatArray.union(other: Iterable<Float>):
Set<Float> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set
containing all distinct elements from both collections.\n * \n * The returned set preserves the element iteration order
of the original array.\n * Those elements of the [other] collection that are unique are iterated in the end\n * in the
order of the [other] collection.\n * \n * To get a set containing all elements that are contained in both collections use
[intersect].\n */\npublic infix fun DoubleArray.union(other: Iterable<Double>): Set<Double> {\n    val set =
this.toMutableSet()\n    set.addAll(other)\n    return set\n}\n\n/**\n * Returns a set containing all distinct elements
from both collections.\n * \n * The returned set preserves the element iteration order of the original array.\n * Those
elements of the [other] collection that are unique are iterated in the end\n * in the order of the [other] collection.\n *
\n * To get a set containing all elements that are contained in both collections use [intersect].\n */\npublic infix fun
BooleanArray.union(other: Iterable<Boolean>): Set<Boolean> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n
return set\n}\n\n/**\n * Returns a set containing all distinct elements from both collections.\n * \n * The returned set
preserves the element iteration order of the original array.\n * Those elements of the [other] collection that are
unique are iterated in the end\n * in the order of the [other] collection.\n * \n * To get a set containing all elements
that are contained in both collections use [intersect].\n */\npublic infix fun CharArray.union(other: Iterable<Char>):
Set<Char> {\n    val set = this.toMutableSet()\n    set.addAll(other)\n

```

```

return set\n}\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n */\npublic inline fun <T> Array<out T>.all(predicate: (T) ->
Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n}\n/**\n *
Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n */\npublic inline fun ByteArray.all(predicate: (Byte) -> Boolean):
Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n}\n/**\n * Returns `true` if
all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n
*/\npublic inline fun ShortArray.all(predicate: (Short) -> Boolean): Boolean {\n for (element in this) if
(!predicate(element)) return false\n return true\n}\n}\n/**\n * Returns `true` if all elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun
IntArray.all(predicate: (Int) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n
return true\n}\n}\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n */\npublic inline fun LongArray.all(predicate: (Long) -> Boolean):
Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n}\n/**\n * Returns `true` if
all elements match the given [predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n
*/\npublic inline fun FloatArray.all(predicate: (Float) -> Boolean): Boolean {\n for (element in this) if
(!predicate(element)) return false\n return true\n}\n}\n/**\n * Returns `true` if all elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.all\n */\npublic inline fun
DoubleArray.all(predicate: (Double) -> Boolean): Boolean {\n for (element in this) if (!predicate(element)) return
false\n return true\n}\n}\n/**\n * Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n */\npublic inline fun BooleanArray.all(predicate: (Boolean) ->
Boolean): Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n}\n/**\n *
Returns `true` if all elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n */\npublic inline fun CharArray.all(predicate: (Char) -> Boolean):
Boolean {\n for (element in this) if (!predicate(element)) return false\n return true\n}\n}\n/**\n * Returns `true` if
array has at least one element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun
<T> Array<out T>.any(): Boolean {\n return !isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one
element.\n * \n * @sample samples.collections.Collections.Aggregates.any\n */\npublic fun ByteArray.any():
Boolean {\n return !isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun ShortArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun IntArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun LongArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun FloatArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun DoubleArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun BooleanArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if array has at least one element.\n * \n * @sample
samples.collections.Collections.Aggregates.any\n */\npublic fun CharArray.any(): Boolean {\n return
!isEmpty()\n}\n}\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun <T> Array<out
T>.any(predicate: (T) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return
false\n}\n}\n/**\n * Returns `true` if at least one element matches the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\n */\npublic inline fun ByteArray.any(predicate:
(Byte) -> Boolean): Boolean {\n for (element in this) if (predicate(element)) return true\n return

```



```

var count = 0\n  for (element in this) if (predicate(element)) ++count\n  return count\n}\n\n/**\n * Returns the
number of elements matching the given [predicate].\n */\npublic inline fun BooleanArray.count(predicate: (Boolean)
-> Boolean): Int {\n  var count = 0\n  for (element in this) if (predicate(element)) ++count\n  return
count\n}\n\n/**\n * Returns the number of elements matching the given [predicate].\n */\npublic inline fun
CharArray.count(predicate: (Char) -> Boolean): Int {\n  var count = 0\n  for (element in this) if
(predicate(element)) ++count\n  return count\n}\n\n/**\n * Accumulates value starting with [initial] value and
applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes current accumulator
value and an element, and calculates the next accumulator value.\n */\npublic inline fun <T, R> Array<out
T>.fold(initial: R, operation: (acc: R, T) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
ByteArray.fold(initial: R, operation: (acc: R, Byte) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
ShortArray.fold(initial: R, operation: (acc: R, Short) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
IntArray.fold(initial: R, operation: (acc: R, Int) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
LongArray.fold(initial: R, operation: (acc: R, Long) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
FloatArray.fold(initial: R, operation: (acc: R, Float) -> R): R {\n  var accumulator = initial\n  for (element in this)
accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value starting
with [initial] value and applying [operation] from left to right\n * to current accumulator value and each element.\n *
\n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun <R>
DoubleArray.fold(initial: R, operation: (acc: R, Double) -> R): R {\n  var accumulator = initial\n  for (element in
this) accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates value
starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and each
element.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that
takes current accumulator value and an element, and calculates the next accumulator value.\n */\npublic inline fun
<R> BooleanArray.fold(initial: R, operation: (acc: R, Boolean) -> R): R {\n  var accumulator = initial\n  for
(element in this) accumulator = operation(accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from left to right\n * to current accumulator value and
each element.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation]

```

function that takes current accumulator value and an element, and calculates the next accumulator value.

```

*^public inline fun <R> CharArray.fold(initial: R, operation: (acc: R, Char) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <T, R> Array<out T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> ByteArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> ShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> IntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> LongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> FloatArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Float) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

*^public inline fun <R> DoubleArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Double) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element with its index in the original array.

Returns the

specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value\n \* and the element itself, and calculates the next accumulator value.\n

```

public inline fun <R> BooleanArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Boolean) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n

```

public inline fun <R> CharArray.foldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <T, R> Array<out T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> ByteArray.foldRight(initial: R, operation: (Byte, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> ShortArray.foldRight(initial: R, operation: (Short, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> IntArray.foldRight(initial: R, operation: (Int, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> LongArray.foldRight(initial: R, operation: (Long, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> FloatArray.foldRight(initial: R, operation: (Float, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

\n \* Accumulates value starting with [initial] value and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Returns the specified [initial] value if the array is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.\n

```

public inline fun <R> DoubleArray.foldRight(initial: R, operation: (Double, acc: R) -> R): R {
    var index = lastIndex
    var

```

```

accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right
to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the
next accumulator value.\n */\npublic inline fun <R> BooleanArray.foldRight(initial: R, operation: (Boolean, acc: R)
-> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator =
operation(get(index--), accumulator)\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with
[initial] value and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes an element
and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R>
CharArray.foldRight(initial: R, operation: (Char, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator =
initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <T, R> Array<out T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc: R) -> R): R
{\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the
original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator
value, and calculates the next accumulator value.\n */\npublic inline fun <R> ByteArray.foldRightIndexed(initial: R,
operation: (index: Int, Byte, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while
(index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> ShortArray.foldRightIndexed(initial: R, operation: (index: Int, Short, acc: R) -> R): R {\n
var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(index,
get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with
[initial] value and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, the element itself\n * and current accumulator value, and
calculates the next accumulator value.\n */\npublic inline fun <R> IntArray.foldRightIndexed(initial: R, operation:
(index: Int, Int, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array
is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself\n * and current
accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R>
LongArray.foldRightIndexed(initial: R, operation: (index: Int, Long, acc: R) -> R): R {\n  var index = lastIndex\n
var accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n
    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying
[operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n
* \n * Returns the specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the
index of an element, the element itself\n * and current accumulator value, and calculates the next accumulator

```

```

value.\n */\npublic inline fun <R> FloatArray.foldRightIndexed(initial: R, operation: (index: Int, Float, acc: R) ->
R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the
original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator
value, and calculates the next accumulator value.\n */\npublic inline fun <R> DoubleArray.foldRightIndexed(initial:
R, operation: (index: Int, Double, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while
(index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <R> BooleanArray.foldRightIndexed(initial: R, operation: (index: Int, Boolean, acc: R) -> R):
R {\n  var index = lastIndex\n  var accumulator = initial\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from right to left\n * to each element with its index in the
original array and current accumulator value.\n * \n * Returns the specified [initial] value if the array is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself\n * and current accumulator
value, and calculates the next accumulator value.\n */\npublic inline fun <R> CharArray.foldRightIndexed(initial: R,
operation: (index: Int, Char, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator = initial\n  while
(index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return
accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun <T> Array<out
T>.forEach(action: (T) -> Unit): Unit {\n  for (element in this) action(element)\n}\n\n/**\n * Performs the given
[action] on each element.\n */\npublic inline fun ByteArray.forEach(action: (Byte) -> Unit): Unit {\n  for (element
in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun
ShortArray.forEach(action: (Short) -> Unit): Unit {\n  for (element in this) action(element)\n}\n\n/**\n * Performs
the given [action] on each element.\n */\npublic inline fun IntArray.forEach(action: (Int) -> Unit): Unit {\n  for
(element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline fun
LongArray.forEach(action: (Long) -> Unit): Unit {\n  for (element in this) action(element)\n}\n\n/**\n * Performs
the given [action] on each element.\n */\npublic inline fun FloatArray.forEach(action: (Float) -> Unit): Unit {\n
for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n */\npublic inline
fun DoubleArray.forEach(action: (Double) -> Unit): Unit {\n  for (element in this) action(element)\n}\n\n/**\n *
Performs the given [action] on each element.\n */\npublic inline fun BooleanArray.forEach(action: (Boolean) ->
Unit): Unit {\n  for (element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element.\n
*/\npublic inline fun CharArray.forEach(action: (Char) -> Unit): Unit {\n  for (element in this)
action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the
element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs the
action on the element.\n */\npublic inline fun <T> Array<out T>.forEachIndexed(action: (index: Int, T) -> Unit):
Unit {\n  var index = 0\n  for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on
each element, providing sequential index with the element.\n * @param [action] function that takes the index of an
element and the element itself\n * and performs the action on the element.\n */\npublic inline fun
ByteArray.forEachIndexed(action: (index: Int, Byte) -> Unit): Unit {\n  var index = 0\n  for (item in this)
action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with
the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs
the action on the element.\n */\npublic inline fun ShortArray.forEachIndexed(action: (index: Int, Short) -> Unit):
Unit {\n  var index = 0\n  for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on
each element, providing sequential index with the element.\n * @param [action] function that takes the index of an

```

```

element and the element itself\n * and performs the action on the element.\n */\npublic inline fun
IntArray.forEachIndexed(action: (index: Int, Int) -> Unit): Unit {\n    var index = 0\n    for (item in this)
action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with
the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs
the action on the element.\n */\npublic inline fun LongArray.forEachIndexed(action: (index: Int, Long) -> Unit):
Unit {\n    var index = 0\n    for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on
each element, providing sequential index with the element.\n * @param [action] function that takes the index of an
element and the element itself\n * and performs the action on the element.\n */\npublic inline fun
FloatArray.forEachIndexed(action: (index: Int, Float) -> Unit): Unit {\n    var index = 0\n    for (item in this)
action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with
the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs
the action on the element.\n */\npublic inline fun DoubleArray.forEachIndexed(action: (index: Int, Double) -> Unit):
Unit {\n    var index = 0\n    for (item in this) action(index++, item)\n}\n\n/**\n * Performs the given [action] on
each element, providing sequential index with the element.\n * @param [action] function that takes the index of an
element and the element itself\n * and performs the action on the element.\n */\npublic inline fun
BooleanArray.forEachIndexed(action: (index: Int, Boolean) -> Unit): Unit {\n    var index = 0\n    for (item in this)
action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with
the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs
the action on the element.\n */\npublic inline fun CharArray.forEachIndexed(action: (index: Int, Char) -> Unit): Unit
{\n    var index = 0\n    for (item in this) action(index++, item)\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Array<out Double>.max(): Double? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Array<out Float>.max(): Float? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun <T : Comparable<T>> Array<out T>.max(): T? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun ByteArray.max(): Byte? {\n    return maxOrNull()\n}\n\n@Deprecated("Use
maxOrNull instead.", ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5", hiddenSince = "1.6")\npublic fun ShortArray.max(): Short? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun IntArray.max(): Int? {\n    return maxOrNull()\n}\n\n@Deprecated("Use
maxOrNull instead.", ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5", hiddenSince = "1.6")\npublic fun LongArray.max(): Long? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun FloatArray.max(): Float? {\n    return maxOrNull()\n}\n\n@Deprecated("Use
maxOrNull instead.", ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5", hiddenSince = "1.6")\npublic fun DoubleArray.max(): Double? {\n    return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun CharArray.max(): Char? {\n    return maxOrNull()\n}\n\n@Deprecated("Use
maxByOrNull instead.", ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.4", errorSince = "1.5", hiddenSince = "1.6")\npublic inline fun <T, R : Comparable<R>> Array<out

```



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{\n      maxElem = e\n      maxValue = v\n    }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> LongArray.maxByOrNull(selector: (Long) -> R): Long? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)\n            {\n                maxElem = e\n                maxValue = v\n            }\n    }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> FloatArray.maxByOrNull(selector: (Float) -> R): Float? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)\n            {\n                maxElem = e\n                maxValue = v\n            }\n    }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> DoubleArray.maxByOrNull(selector: (Double) -> R): Double? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)\n            {\n                maxElem = e\n                maxValue = v\n            }\n    }\n }\n return maxElem\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <R : Comparable<R>> BooleanArray.maxByOrNull(selector: (Boolean) -> R): Boolean? {\n    if (isEmpty()) return null\n    var maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue = selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)\n            {\n                maxElem = e\n                maxValue = v\n            }\n    }\n }\n return maxElem\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.maxOf(selector: (T) -> Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.maxOf(selector: (Byte) -> Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n */

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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.maxOf(selector: (Short) ->\nDouble): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to\n * each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is\n * `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
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```
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```
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`NaN`.n * .n * @throws NoSuchElementException if the array is empty.n
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ByLambdaReturnTypen@kotlin.internal.InlineOnlynpublic inline fun <T> Array<out T>.maxOf(selector: (T) ->
Float): Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
in 1..lastIndex) {n val v = selector(this[i])n maxValue = maxOf(maxValue, v)n }n return
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*/n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolution
ByLambdaReturnTypen@kotlin.internal.InlineOnlynpublic inline fun ByteArray.maxOf(selector: (Byte) -> Float):
Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
in 1..lastIndex) {n val v = selector(this[i])n maxValue = maxOf(maxValue, v)n }n return
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Float): Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
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ByLambdaReturnTypen@kotlin.internal.InlineOnlynpublic inline fun IntArray.maxOf(selector: (Int) -> Float):
Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
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ByLambdaReturnTypen@kotlin.internal.InlineOnlynpublic inline fun LongArray.maxOf(selector: (Long) ->
Float): Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
in 1..lastIndex) {n val v = selector(this[i])n maxValue = maxOf(maxValue, v)n }n return
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*/n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolution
ByLambdaReturnTypen@kotlin.internal.InlineOnlynpublic inline fun FloatArray.maxOf(selector: (Float) ->
Float): Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
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Float): Float {n if (isEmpty()) throw NoSuchElementException()n var maxValue = selector(this[0])n for (i
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`NaN`.n * \n * @throws NoSuchElementException if the array is empty.n

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each element in the array.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n \* \n \* @throws NoSuchElementException if the array is empty.\n

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.maxOf(selector: (Boolean) ->
Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var maxValue = selector(this[0])\n for (i
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Float {\n if (isEmpty()) throw NoSuchElementException()\n var maxValue = selector(this[0])\n for (i in
1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n }\n return
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>> Array<out
T>.maxOf(selector: (T) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var maxValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ByteArray.maxOf(selector: (Byte) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
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ShortArray.maxOf(selector: (Short) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
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LongArray.maxOf(selector: (Long) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n * Returns the largest value among all values

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produced by [selector] function\n * applied to each element in the array.\n * \n * @throws
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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
FloatArray.maxOf(selector: (Float) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
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DoubleArray.maxOf(selector: (Double) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
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(T) -> Double): Double? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in
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Double): Double? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n
val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n }\n return maxValue\n}\n\n/**\n * Returns
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> Double): Double? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex)
{\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n }\n return maxValue\n}\n\n/**\n *

```

Returns the largest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements. If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.

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```
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```

```
{\n    val v = selector(this[i])\n    maxValue = maxOf(maxValue, v)\n }\n return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.maxOfOrNull(selector: (Short) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.maxOfOrNull(selector: (Int) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.maxOfOrNull(selector: (Long) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.maxOfOrNull(selector: (Float) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.maxOfOrNull(selector: (Double) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.maxOfOrNull(selector:
```

(Boolean) -> Float): Float? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n }\n return maxValue}\n\n/\*\*\n \* Returns the largest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.maxOrNull(selector: (Char) -> Float): Float? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>> Array<out T>.maxOrNull(selector: (T) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> ByteArray.maxOrNull(selector: (Byte) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> ShortArray.maxOrNull(selector: (Short) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> IntArray.maxOrNull(selector: (Int) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> LongArray.maxOrNull(selector: (Long) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> FloatArray.maxOrNull(selector: (Float) -> R): R? {\n if (isEmpty()) return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n maxValue = v\n }\n }\n return maxValue}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
```

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
DoubleArray.maxOfOrNull(selector: (Double) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n
maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
BooleanArray.maxOfOrNull(selector: (Boolean) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n
maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharArray.maxOfOrNull(selector: (Char) -> R): R? {\n  if (isEmpty()) return null\n  var maxValue =
selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if (maxValue < v) {\n
maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n *
@throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out
T>.maxOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return
maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if
the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.maxOfWith(comparator:
Comparator<in R>, selector: (Byte) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.maxOfWith(comparator:
Comparator<in R>, selector: (Short) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.maxOfWith(comparator:
Comparator<in R>, selector: (Int) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var
maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(maxValue, v) < 0) {\n      maxValue = v\n    }\n  }\n  return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ShortArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Short) -> R): R? {\n if (isEmpty())
return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
IntArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Int) -> R): R? {\n if (isEmpty()) return
null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
LongArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Long) -> R): R? {\n if (isEmpty())
return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
FloatArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Float) -> R): R? {\n if (isEmpty())
return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
DoubleArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Double) -> R): R? {\n if (isEmpty())
return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
BooleanArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Boolean) -> R): R? {\n if (isEmpty())
return null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
CharArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n if (isEmpty()) return
null\n var maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(maxValue, v) < 0) {\n maxValue = v\n }\n }\n return maxValue\n}\n\n/**\n *
Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n

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*^@SinceKotlin("1.4")\npublic fun Array<out Double>.maxOrNull(): Double? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return\n  max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n*^@SinceKotlin("1.4")\npublic fun Array<out Float>.maxOrNull(): Float? {\n  if (isEmpty())\n  return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Array<out T>.maxOrNull(): T? {\n  if (isEmpty())\n  return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun ByteArray.maxOrNull(): Byte? {\n  if (isEmpty()) return null\n  var max =\n  this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun\nShortArray.maxOrNull(): Short? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if\n  there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun IntArray.maxOrNull(): Int? {\n  if (isEmpty())\n  return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun LongArray.maxOrNull(): Long? {\n  if (isEmpty()) return null\n  var max\n  = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n*^@SinceKotlin("1.4")\npublic fun FloatArray.maxOrNull(): Float? {\n  if (isEmpty()) return null\n  var max\n  = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return\n  max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n*^@SinceKotlin("1.4")\npublic fun DoubleArray.maxOrNull(): Double? {\n  if (isEmpty())\n  return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    max = maxOf(max, e)\n  }\n  return\n  max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n */\n*^@SinceKotlin("1.4")\npublic fun CharArray.maxOrNull(): Char? {\n  if (isEmpty()) return null\n  var max =\n  this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (max < e) max = e\n  }\n  return\n  max\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun <T> Array<out T>.maxWith(comparator: Comparator<in T>): T? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun ByteArray.maxWith(comparator: Comparator<in Byte>): Byte? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun ShortArray.maxWith(comparator: Comparator<in Short>): Short? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun IntArray.maxWith(comparator: Comparator<in Int>): Int? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun LongArray.maxWith(comparator: Comparator<in Long>): Long? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince\n= "1.5", hiddenSince = "1.6")\npublic fun FloatArray.maxWith(comparator: Comparator<in Float>): Float? {\n  return\n  maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince

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= \"1.5\", hiddenSince = \"1.6\")\npublic fun DoubleArray.maxWith(comparator: Comparator<in Double>): Double?
{\n  return maxWithOrNull(comparator)\n}\n\n@Deprecated(\"Use maxWithOrNull instead.\",
ReplaceWith(\"this.maxWithOrNull(comparator)\"))\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince
= \"1.5\", hiddenSince = \"1.6\")\npublic fun BooleanArray.maxWith(comparator: Comparator<in Boolean>):
Boolean? {\n  return maxWithOrNull(comparator)\n}\n\n@Deprecated(\"Use maxWithOrNull instead.\",
ReplaceWith(\"this.maxWithOrNull(comparator)\"))\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince
= \"1.5\", hiddenSince = \"1.6\")\npublic fun CharArray.maxWith(comparator: Comparator<in Char>): Char? {\n
return maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the largest value according to the
provided [comparator] or `null` if there are no elements.\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun <T> Array<out
T>.maxWithOrNull(comparator: Comparator<in T>): T? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if (comparator.compare(max, e) < 0) max = e\n  }\n  return
max\n}\n\n/**\n * Returns the first element having the largest value according to the provided [comparator] or `null`
if there are no elements.\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun ByteArray.maxWithOrNull(comparator:
Comparator<in Byte>): Byte? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n
val e = this[i]\n    if (comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the
first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun ShortArray.maxWithOrNull(comparator: Comparator<in Short>): Short? {\n
if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun IntArray.maxWithOrNull(comparator: Comparator<in Int>): Int? {\n
if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun LongArray.maxWithOrNull(comparator: Comparator<in Long>): Long? {\n
if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun FloatArray.maxWithOrNull(comparator: Comparator<in Float>): Float? {\n
if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun DoubleArray.maxWithOrNull(comparator: Comparator<in Double>):
Double? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n
if (comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun BooleanArray.maxWithOrNull(comparator: Comparator<in Boolean>):
Boolean? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n
if (comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n/**\n * Returns the first element having the
largest value according to the provided [comparator] or `null` if there are no elements.\n
\n * \n * @SinceKotlin(\"1.4\")\n * \n * public fun CharArray.maxWithOrNull(comparator: Comparator<in Char>): Char? {\n
if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    if
(comparator.compare(max, e) < 0) max = e\n  }\n  return max\n}\n\n@Deprecated(\"Use minOrNull instead.\",
ReplaceWith(\"this.minOrNull()\"))\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.5\",
hiddenSince = \"1.6\")\n@SinceKotlin(\"1.1\")\npublic fun Array<out Double>.min(): Double? {\n  return
minOrNull()\n}\n\n@Deprecated(\"Use minOrNull instead.\",
ReplaceWith(\"this.minOrNull()\"))\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.5\",
hiddenSince = \"1.6\")\n@SinceKotlin(\"1.1\")\npublic fun Array<out Float>.min(): Float? {\n  return

```

```

minOrNull()\n}\n\n@Deprecated(\\"Use minOrNull instead.\",
ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince = \\"1.5\",
hiddenSince = \\"1.6\")\npublic fun <T : Comparable<T>> Array<out T>.min(): T? {\n    return
minOrNull()\n}\n\n@Deprecated(\\"Use minOrNull instead.\",
ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince = \\"1.5\",
hiddenSince = \\"1.6\")\npublic fun ByteArray.min(): Byte? {\n    return minOrNull()\n}\n\n@Deprecated(\\"Use
minOrNull instead.\", ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\",
errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic fun ShortArray.min(): Short? {\n    return
minOrNull()\n}\n\n@Deprecated(\\"Use minOrNull instead.\",
ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince = \\"1.5\",
hiddenSince = \\"1.6\")\npublic fun IntArray.min(): Int? {\n    return minOrNull()\n}\n\n@Deprecated(\\"Use
minOrNull instead.\", ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\",
errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic fun LongArray.min(): Long? {\n    return
minOrNull()\n}\n\n@Deprecated(\\"Use minOrNull instead.\",
ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince = \\"1.5\",
hiddenSince = \\"1.6\")\npublic fun FloatArray.min(): Float? {\n    return minOrNull()\n}\n\n@Deprecated(\\"Use
minOrNull instead.\", ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\",
errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic fun DoubleArray.min(): Double? {\n    return
minOrNull()\n}\n\n@Deprecated(\\"Use minOrNull instead.\",
ReplaceWith(\\"this.minOrNull()\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince = \\"1.5\",
hiddenSince = \\"1.6\")\npublic fun CharArray.min(): Char? {\n    return minOrNull()\n}\n\n@Deprecated(\\"Use
minByOrNull instead.\", ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince =
\\"1.4\", errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <T, R : Comparable<R>> Array<out
T>.minBy(selector: (T) -> R): T? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull
instead.\", ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\",
errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> ByteArray.minBy(selector:
(Byte) -> R): Byte? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> ShortArray.minBy(selector: (Short) -> R):
Short? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> IntArray.minBy(selector: (Int) -> R): Int?
{\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> LongArray.minBy(selector: (Long) -> R):
Long? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> FloatArray.minBy(selector: (Float) -> R):
Float? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> DoubleArray.minBy(selector: (Double) ->
R): Double? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> BooleanArray.minBy(selector: (Boolean) -
> R): Boolean? {\n    return minByOrNull(selector)\n}\n\n@Deprecated(\\"Use minByOrNull instead.\",
ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince =
\\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <R : Comparable<R>> CharArray.minBy(selector: (Char) -> R):
Char? {\n    return minByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the smallest value of the

```

```

given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Array<out T>.minByOrNull(selector: (T) -> R): T? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> ByteArray.minByOrNull(selector: (Byte) -> R): Byte? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
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samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> ShortArray.minByOrNull(selector: (Short) -> R): Short? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
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samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> IntArray.minByOrNull(selector: (Int) -> R): Int? {\n if (isEmpty()) return null\n var minElem
= this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> LongArray.minByOrNull(selector: (Long) -> R): Long? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> FloatArray.minByOrNull(selector: (Float) -> R): Float? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> DoubleArray.minByOrNull(selector: (Double) -> R): Double? {\n if (isEmpty()) return null\n
var minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> BooleanArray.minByOrNull(selector: (Boolean) -> R): Boolean? {\n if (isEmpty()) return
null\n var minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var
minValue = selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if
(minValue > v) {\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n *

```

Returns the first element yielding the smallest value of the given function or `null` if there are no elements.

```

@sample samples.collections.Collections.Aggregates.minByOrNull
@SinceKotlin("1.4")
public inline fun
<R : Comparable<R>> CharArray.minByOrNull(selector: (Char) -> R): Char? {
    if (isEmpty()) return null
    var minElem = this[0]
    val lastIndex = this.lastIndex
    if (lastIndex == 0) return minElem
    var minValue =
    selector(minElem)
    for (i in 1..lastIndex) {
        val e = this[i]
        val v = selector(e)
        if (minValue > v)
        {
            minElem = e
            minValue = v
        }
    }
    return minElem
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
 \* @throws NoSuchElementException if the array is empty.

```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun <T> Array<out T>.minOf(selector: (T) ->
Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
 \* @throws NoSuchElementException if the array is empty.

```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun ByteArray.minOf(selector: (Byte) ->
Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
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```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun ShortArray.minOf(selector: (Short) ->
Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
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```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun IntArray.minOf(selector: (Int) -> Double):
Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in
    1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
 \* @throws NoSuchElementException if the array is empty.

```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun LongArray.minOf(selector: (Long) ->
Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in
    1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array.  
 \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.  
 \* @throws NoSuchElementException if the array is empty.

```

@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun FloatArray.minOf(selector: (Float) ->
Double): Double {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in
    1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
    minValue
}

```

```

minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOf(selector: (Double) -> Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOf(selector: (Boolean) -> Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOf(selector: (Char) -> Double): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOf(selector: (T) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOf(selector: (Byte) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOf(selector: (Short) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n *\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOf(selector: (Int) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in

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1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n } \n return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOf(selector: (Long) ->
Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOf(selector: (Float) -> Float):
Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOf(selector: (Double) ->
Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOf(selector: (Boolean) ->
Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOf(selector: (Char) -> Float):
Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in
1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return
minValue}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>> Array<out
T>.minOf(selector: (T) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue =
selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n
minValue = v\n        }\n    }\n    return minValue}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
ByteArray.minOf(selector: (Byte) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue

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= selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the\n * array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nShortArray.minOf(selector: (Short) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nIntArray.minOf(selector: (Int) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var minValue =\n  selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the\n * array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nLongArray.minOf(selector: (Long) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nFloatArray.minOf(selector: (Float) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nDoubleArray.minOf(selector: (Double) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nBooleanArray.minOf(selector: (Boolean) -> R): R {\n  if (isEmpty()) throw NoSuchElementException()\n  var\n  minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n      val v = selector(this[i])\n      if (minValue > v) {\n          minValue = v\n      }\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values\n * produced by [selector] function\n * applied to each element in the array.\n * \n * @throws\n * NoSuchElementException if the array is empty.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>

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CharArray.minOf(selector: (Char) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (minValue > v) {\n minValue = v\n }\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOfOrNull(selector: (T) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOfOrNull(selector: (Byte) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOfOrNull(selector: (Short) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOfOrNull(selector: (Int) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOfOrNull(selector: (Long) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOfOrNull(selector: (Float) -> Double): Double? {\n if (isEmpty()) return null\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n }\n return minValue}\n\n/\*\*\n \* Returns the smallest value among all values produced by [selector] function\n \* applied to each element in the array or `null` if there are no elements.\n \* \n \* If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOrNull(selector:
(Double) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOrNull(selector:
(Boolean) -> Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in
1..lastIndex) {\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function
is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOrNull(selector: (Char) ->
Double): Double? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns
the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null`
if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.minOrNull(selector:
(T) -> Float): Float? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex)
{\n    val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n *
Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.minOrNull(selector: (Byte) ->
Float): Float? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if
there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.minOrNull(selector: (Short) -
> Float): Float? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if
there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.minOrNull(selector: (Int) ->
Float): Float? {\n  if (isEmpty()) return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n
val v = selector(this[i])\n    minValue = minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if
there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is
`NaN`.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.minOfOrNull(selector: (Long) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.minOfOrNull(selector: (Float) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.minOfOrNull(selector: (Double) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.minOfOrNull(selector: (Boolean) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.minOfOrNull(selector: (Char) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>> Array<out T>.minOfOrNull(selector: (T) -> R): R? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>> ByteArray.minOfOrNull(selector: (Byte) -> R): R? {\n    if (isEmpty()) return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
```

```

ShortArray.minOrNull(selector: (Short) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

IntArray.minOrNull(selector: (Int) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

LongArray.minOrNull(selector: (Long) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

FloatArray.minOrNull(selector: (Float) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

DoubleArray.minOrNull(selector: (Double) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

BooleanArray.minOrNull(selector: (Boolean) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value among all values produced by [selector] function applied to each element in the array or `null` if there are no elements.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <R : Comparable<R>>

```

CharArray.minOrNull(selector: (Char) -> R): R? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

\* Returns the smallest value according to the provided [comparator] among all values produced by [selector] function applied to each element in the array.

\* @throws NoSuchElementException if the array is empty.

`@SinceKotlin("1.4")`  
`@OptIn(kotlin.experimental.ExperimentalTypeInference::class)`  
`@OverloadResolutionByLambdaReturnType`  
`@kotlin.internal.InlineOnly`  
public inline fun <T, R> Array<out T>.minOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {
 if (isEmpty()) throw NoSuchElementException
 var minValue = selector(this[0])
 for (i in 1..lastIndex) {
 val v = selector(this[i])
 if (comparator.compare(minValue, v) > 0) {
 minValue = v
 }
 }
 return minValue
}

\* Returns the smallest value according to the provided [comparator] among all values produced by [selector] function applied to each element in the array.

\* @throws NoSuchElementException if

the array is empty.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.minOfWith(comparator:\nComparator<in R>, selector: (Byte) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.minOfWith(comparator:\nComparator<in R>, selector: (Short) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.minOfWith(comparator:\nComparator<in R>, selector: (Int) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var minValue\n    = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (comparator.compare(minValue,\nv) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value\n * according to the provided [comparator]\n * among all values produced by [selector] function applied to each\n * element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.minOfWith(comparator:\nComparator<in R>, selector: (Long) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.minOfWith(comparator:\nComparator<in R>, selector: (Float) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.minOfWith(comparator:\nComparator<in R>, selector: (Double) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> BooleanArray.minOfWith(comparator:\nComparator<in R>, selector: (Boolean) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n */
```

Returns the smallest value according to the provided [comparator] \* among all values produced by [selector] function applied to each element in the array. \* @throws NoSuchElementException if the array is empty. \*

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharArray.minOfWith(comparator:
Comparator<in R>, selector: (Char) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var
minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Array<out
T>.minOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    if (isEmpty()) return null\n
var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ByteArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Byte) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ShortArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Short) -> R): R? {\n    if (isEmpty())
return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
IntArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Int) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
LongArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Long) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/*\n */
Returns the smallest value according to the provided [comparator] * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
FloatArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Float) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if

```

```

(comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n    return minValue\n}\n\n**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
DoubleArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Double) -> R): R? {\n    if (isEmpty())
return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
BooleanArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Boolean) -> R): R? {\n    if (isEmpty())
return null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
CharArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n    if (isEmpty()) return
null\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if
(comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic fun Array<out Double>.minOrNull(): Double? {\n    if (isEmpty()) return null\n
var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        min = minOf(min, e)\n    }\n    return
min\n}\n\n**\n * Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is
`NaN` returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic fun Array<out Float>.minOrNull(): Float? {\n    if (isEmpty()) return null\n
var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        min = minOf(min,
e)\n    }\n    return min\n}\n\n**\n * Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun <T : Comparable<T>> Array<out T>.minOrNull(): T? {\n    if (isEmpty())
return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n
return min\n}\n\n**\n * Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun ByteArray.minOrNull(): Byte? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun ShortArray.minOrNull(): Short? {\n    if (isEmpty()) return null\n    var min = this[0]\n
for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun IntArray.minOrNull(): Int? {\n    if (isEmpty()) return null\n    var min = this[0]\n
for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun LongArray.minOrNull(): Long? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic fun FloatArray.minOrNull(): Float? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        min = minOf(min, e)\n    }\n    return min\n}\n\n**\n *
Returns the smallest element or `null` if there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic fun DoubleArray.minOrNull(): Double? {\n    if (isEmpty()) return null\n    var
min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        min = minOf(min, e)\n    }\n    return
min\n}\n\n**\n * Returns the smallest element or `null` if there are no elements.\n

```

```

min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun CharArray.minOrNull(): Char? {\n    if (isEmpty()) return null\n    var min =
this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return
min\n}\n\n@Deprecated("Use minWithOrNull instead."),
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun <T> Array<out T>.minWith(comparator: Comparator<in T>): T? {\n
return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun ByteArray.minWith(comparator: Comparator<in Byte>): Byte? {\n
return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun ShortArray.minWith(comparator: Comparator<in Short>): Short? {\n
return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun IntArray.minWith(comparator: Comparator<in Int>): Int? {\n    return
minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun LongArray.minWith(comparator: Comparator<in Long>): Long? {\n
return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun FloatArray.minWith(comparator: Comparator<in Float>): Float? {\n
return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun DoubleArray.minWith(comparator: Comparator<in Double>): Double?
{\n    return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun BooleanArray.minWith(comparator: Comparator<in Boolean>):
Boolean? {\n    return minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun CharArray.minWith(comparator: Comparator<in Char>): Char? {\n
return minWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the smallest value according to
the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun <T> Array<out
T>.minWithOrNull(comparator: Comparator<in T>): T? {\n    if (isEmpty()) return null\n    var min = this[0]\n
for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n
return
min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or
`null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun ByteArray.minWithOrNull(comparator:
Comparator<in Byte>): Byte? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n
val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first
element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun ShortArray.minWithOrNull(comparator: Comparator<in Short>): Short? {\n
if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun IntArray.minWithOrNull(comparator: Comparator<in Int>): Int? {\n    if
(isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\npublic fun LongArray.minWithOrNull(comparator: Comparator<in Long>): Long? {\n

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if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin("1.4")\npublic fun FloatArray.minWithOrNull(comparator: Comparator<in Float>): Float? {\n
if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin("1.4")\npublic fun DoubleArray.minWithOrNull(comparator: Comparator<in Double>):
Double? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin("1.4")\npublic fun BooleanArray.minWithOrNull(comparator: Comparator<in Boolean>):
Boolean? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n
if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the
smallest value according to the provided [comparator] or `null` if there are no elements.\n
*\n\n@SinceKotlin("1.4")\npublic fun CharArray.minWithOrNull(comparator: Comparator<in Char>): Char? {\n
if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if
(comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns `true` if the array has no
elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n *\n\npublic fun <T> Array<out
T>.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n *
@sample samples.collections.Collections.Aggregates.none\n *\n\npublic fun ByteArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun ShortArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun IntArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun LongArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun FloatArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun DoubleArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun BooleanArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n\npublic fun CharArray.none(): Boolean {\n    return
isEmpty()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *\n\npublic inline fun <T> Array<out
T>.none(predicate: (T) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *\n\npublic inline fun ByteArray.none(predicate:
(Byte) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *\n\npublic inline fun ShortArray.none(predicate:
(Short) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *\n\npublic inline fun IntArray.none(predicate: (Int)
-> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return false\n    return true\n}\n\n/**\n *
Returns `true` if no elements match the given [predicate].\n * \n * @sample

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samples.collections.Collections.Aggregates.noneWithPredicate\n *^/npublic inline fun LongArray.none(predicate:
(Long) -> Boolean): Boolean {\n  for (element in this) if (predicate(element)) return false\n  return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *^/npublic inline fun FloatArray.none(predicate:
(Float) -> Boolean): Boolean {\n  for (element in this) if (predicate(element)) return false\n  return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *^/npublic inline fun DoubleArray.none(predicate:
(Double) -> Boolean): Boolean {\n  for (element in this) if (predicate(element)) return false\n  return
true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *^/npublic inline fun
BooleanArray.none(predicate: (Boolean) -> Boolean): Boolean {\n  for (element in this) if (predicate(element))
return false\n  return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *^/npublic inline fun CharArray.none(predicate:
(Char) -> Boolean): Boolean {\n  for (element in this) if (predicate(element)) return false\n  return
true\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.onEach(action: (T) ->
Unit): Array<out T> {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.onEach(action: (Byte) ->
Unit): ByteArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.onEach(action: (Short) ->
Unit): ShortArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.onEach(action: (Int) -> Unit):
IntArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given [action] on
each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.onEach(action: (Long) ->
Unit): LongArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.onEach(action: (Float) ->
Unit): FloatArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.onEach(action: (Double) ->
Unit): DoubleArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.onEach(action: (Boolean)
-> Unit): BooleanArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element and returns the array itself afterwards.\n
*^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.onEach(action: (Char) ->
Unit): CharArray {\n  return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given
[action] on each element, providing sequential index with the element,\n * and returns the array itself afterwards.\n *
@param [action] function that takes the index of an element and the element itself\n * and performs the action on
the element.\n *^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out
T>.onEachIndexed(action: (index: Int, T) -> Unit): Array<out T> {\n  return apply { forEachIndexed(action)
}\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the element,\n * and
returns the array itself afterwards.\n * @param [action] function that takes the index of an element and the element
itself\n * and performs the action on the element.\n *^/n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic

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inline fun ByteArray.onEachIndexed(action: (index: Int, Byte) -> Unit): ByteArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun ShortArray.onEachIndexed(action: (index: Int, Short) -> Unit): ShortArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun IntArray.onEachIndexed(action: (index: Int, Int) -> Unit): IntArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun LongArray.onEachIndexed(action: (index: Int, Long) -> Unit): LongArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun FloatArray.onEachIndexed(action: (index: Int, Float) -> Unit): FloatArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun DoubleArray.onEachIndexed(action: (index: Int, Double) -> Unit): DoubleArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun BooleanArray.onEachIndexed(action: (index: Int, Boolean) -> Unit): BooleanArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Performs the given [action] on each element, providing sequential index with the element, and returns the array itself afterwards.
 * @param [action] function that takes the index of an element and the element itself and performs the action on the element.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun CharArray.onEachIndexed(action: (index: Int, Char) -> Unit): CharArray {
    return apply {
        forEachIndexed(action)
    }
}

/** Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.
 * Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceOrNull] instead.
 * It returns `null` when its receiver is empty.
 * @param [operation] function that takes current accumulator value and an element and calculates the next accumulator value.
 * @sample samples.collections.Collections.Aggregates.reduce
 */
public inline fun <S, T : S> Array<out T>.reduce(operation: (acc: S, T) -> S): S {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator: S = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(accumulator, this[index])
    }
    return accumulator
}

/** Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element.
 * Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceOrNull] instead.
 * It returns `null` when its receiver is empty.
 * @param [operation] function that takes current accumulator value and an element and calculates the next accumulator value.
 */
public inline fun ByteArray.reduce(operation: (acc: Byte, Byte) -> Byte): Byte {
    if (isEmpty()) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = this[0]
    for (index in 1..lastIndex) {
        accumulator = operation(accumulator, this[index])
    }
    return accumulator
}

```



Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*\npublic inline fun CharArray.reduce(operation: (acc: Char, Char) -> Char): Char {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*\npublic inline fun <S, T : S> Array<out T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator: S = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*\npublic inline fun ByteArray.reduceIndexed(operation: (index: Int, acc: Byte, Byte) -> Byte): Byte {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*\npublic inline fun ShortArray.reduceIndexed(operation: (index: Int, acc: Short, Short) -> Short): Short {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \*\npublic inline fun IntArray.reduceIndexed(operation: (index: Int, acc: Int, Int) -> Int): Int {\n if (isEmpty())\n throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original array.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an

element, current accumulator value and the element itself,  
`@sample samples.collections.Collections.Aggregates.reduce`  
`LongArray.reduceIndexed(operation: (index: Int, acc: Long, Long) -> Long): Long` {  
`if (isEmpty())` throw `UnsupportedOperationException("Empty array can't be reduced.")`  
`var accumulator = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index, accumulator, this[index])` }  
`return accumulator` }  
Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use `[reduceIndexedOrNull]` instead. It returns ``null`` when its receiver is empty.  
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.  
`@sample samples.collections.Collections.Aggregates.reduce`  
`FloatArray.reduceIndexed(operation: (index: Int, acc: Float, Float) -> Float): Float` {  
`if (isEmpty())` throw `UnsupportedOperationException("Empty array can't be reduced.")`  
`var accumulator = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index, accumulator, this[index])` }  
`return accumulator` }  
Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use `[reduceIndexedOrNull]` instead. It returns ``null`` when its receiver is empty.  
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.  
`@sample samples.collections.Collections.Aggregates.reduce`  
`DoubleArray.reduceIndexed(operation: (index: Int, acc: Double, Double) -> Double): Double` {  
`if (isEmpty())` throw `UnsupportedOperationException("Empty array can't be reduced.")`  
`var accumulator = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index, accumulator, this[index])` }  
`return accumulator` }  
Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use `[reduceIndexedOrNull]` instead. It returns ``null`` when its receiver is empty.  
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.  
`@sample samples.collections.Collections.Aggregates.reduce`  
`BooleanArray.reduceIndexed(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): Boolean` {  
`if (isEmpty())` throw `UnsupportedOperationException("Empty array can't be reduced.")`  
`var accumulator = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index, accumulator, this[index])` }  
`return accumulator` }  
Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Throws an exception if this array is empty. If the array can be empty in an expected way, please use `[reduceIndexedOrNull]` instead. It returns ``null`` when its receiver is empty.  
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.  
`@sample samples.collections.Collections.Aggregates.reduce`  
`CharArray.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char` {  
`if (isEmpty())` throw `UnsupportedOperationException("Empty array can't be reduced.")`  
`var accumulator = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index, accumulator, this[index])` }  
`return accumulator` }  
Accumulates value starting with the first element and applying [operation] from left to right to current accumulator value and each element with its index in the original array. Returns ``null`` if the array is empty.  
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.  
`@sample samples.collections.Collections.Aggregates.reduceOrNull`  
`SinceKotlin("1.4")`  
`public inline fun <S, T : S> Array<out T>.reduceIndexedOrNull(operation: (index: Int, acc: S, T) -> S): S?` {  
`if (isEmpty())` return `null`  
`var accumulator: S = this[0]` for (index in `1..lastIndex`) {  
`accumulator = operation(index,`

```

accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element with its index
in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun ByteArray.reduceIndexedOrNull(operation: (index: Int, acc: Byte,
Byte) -> Byte): Byte? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n } \n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator
value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun ShortArray.reduceIndexedOrNull(operation: (index: Int, acc: Short, Short) -> Short): Short? {\n if (isEmpty())\n
return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index,
accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element with its index
in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun IntArray.reduceIndexedOrNull(operation: (index: Int, acc: Int, Int) ->
Int): Int? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n
accumulator = operation(index, accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates
value starting with the first element and applying [operation] from left to right\n * to current accumulator value and
each element with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value and the element itself,\n * and
calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun LongArray.reduceIndexedOrNull(operation: (index: Int, acc: Long,
Long) -> Long): Long? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n } \n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator
value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun FloatArray.reduceIndexedOrNull(operation: (index: Int, acc: Float, Float) -> Float): Float? {\n if (isEmpty())\n
return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index,
accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element with its index
in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\npublic inline fun DoubleArray.reduceIndexedOrNull(operation: (index: Int, acc:
Double, Double) -> Double): Double? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n } \n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator

```

```

value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n * \n * @SinceKotlin("1.4")\npublic inline fun
BooleanArray.reduceIndexedOrNull(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): Boolean? {\n if
(isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =
operation(index, accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting
with the first element and applying [operation] from left to right\n * to current accumulator value and each element
with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\npublic inline fun CharArray.reduceIndexedOrNull(operation: (index: Int, acc: Char,
Char) -> Char): Char? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Array<out T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n if (isEmpty())\n return null\n var
accumulator: S = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ByteArray.reduceOrNull(operation: (acc: Byte, Byte) -> Byte): Byte? {\n if (isEmpty())\n return null\n var
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ShortArray.reduceOrNull(operation: (acc: Short, Short) -> Short): Short? {\n if (isEmpty())\n return null\n
var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
IntArray.reduceOrNull(operation: (acc: Int, Int) -> Int): Int? {\n if (isEmpty())\n return null\n var
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]
from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the array is empty.\n *
\n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
LongArray.reduceOrNull(operation: (acc: Long, Long) -> Long): Long? {\n if (isEmpty())\n return null\n
var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n
}\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]

```

from left to right\n \* to current accumulator value and each element.\n \* \n \* Returns `null` if the array is empty.\n \*  
\n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceOrNull\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun  
FloatArray.reduceOrNull(operation: (acc: Float, Float) -> Float): Float? {\n if (isEmpty())\n return null\n var  
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n  
}\n return accumulator}\n\n/\*\*\n \* Accumulates value starting with the first element and applying [operation]  
from left to right\n \* to current accumulator value and each element.\n \* \n \* Returns `null` if the array is empty.\n \*  
\n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample  
samples.collections.Collections.Aggregates.reduceOrNull\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun  
DoubleArray.reduceOrNull(operation: (acc: Double, Double) -> Double): Double? {\n if (isEmpty())\n return  
null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator,  
this[index])\n } \n return accumulator}\n\n/\*\*\n \* Accumulates value starting with the first element and  
applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Returns `null` if  
the array is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \*  
and calculates the next accumulator value.\n \* \n \* @sample  
samples.collections.Collections.Aggregates.reduceOrNull\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun  
BooleanArray.reduceOrNull(operation: (acc: Boolean, Boolean) -> Boolean): Boolean? {\n if (isEmpty())\n  
return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =  
operation(accumulator, this[index])\n } \n return accumulator}\n\n/\*\*\n \* Accumulates value starting with the  
first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \*  
Returns `null` if the array is empty.\n \* \n \* @param [operation] function that takes current accumulator value and  
an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample  
samples.collections.Collections.Aggregates.reduceOrNull\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun  
CharArray.reduceOrNull(operation: (acc: Char, Char) -> Char): Char? {\n if (isEmpty())\n return null\n var  
accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(accumulator, this[index])\n  
}\n return accumulator}\n\n/\*\*\n \* Accumulates value starting with the last element and applying [operation]  
from right to left\n \* to each element and current accumulator value.\n \* \n \* Throws an exception if this array is  
empty. If the array can be empty in an expected way,\n \* please use [reduceRightOrNull] instead. It returns `null`  
when its receiver is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator  
value,\n \* and calculates the next accumulator value.\n \* \n \* @sample  
samples.collections.Collections.Aggregates.reduceRight\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline fun <S, T : S> Array<out  
T>.reduceRight(operation: (T, acc: S) -> S): S {\n var index = lastIndex\n if (index < 0) throw  
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator: S = get(index--)\n while  
(index >= 0) {\n accumulator = operation(get(index--), accumulator)\n } \n return accumulator}\n\n/\*\*\n \*  
Accumulates value starting with the last element and applying [operation] from right to left\n \* to each element and  
current accumulator value.\n \* \n \* Throws an exception if this array is empty. If the array can be empty in an  
expected way,\n \* please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \*  
@param [operation] function that takes an element and current accumulator value,\n \* and calculates the next  
accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceRight\n \*  
\*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public inline  
fun ByteArray.reduceRight(operation: (Byte, acc: Byte) -> Byte): Byte {\n var index = lastIndex\n if (index < 0)  
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = get(index--)\n  
while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n } \n return  
accumulator}\n\n/\*\*\n \* Accumulates value starting with the last element and applying [operation] from right to  
left\n \* to each element and current accumulator value.\n \* \n \* Throws an exception if this array is empty. If the

array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun ShortArray.reduceRight(operation: (Short, acc: Short) -> Short): Short {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with the last element and applying [operation] from right to left to each element and current accumulator value.

Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun IntArray.reduceRight(operation: (Int, acc: Int) -> Int): Int {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with the last element and applying [operation] from right to left to each element and current accumulator value.

Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun LongArray.reduceRight(operation: (Long, acc: Long) -> Long): Long {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with the last element and applying [operation] from right to left to each element and current accumulator value.

Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun FloatArray.reduceRight(operation: (Float, acc: Float) -> Float): Float {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with the last element and applying [operation] from right to left to each element and current accumulator value.

Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun DoubleArray.reduceRight(operation: (Double, acc: Double) -> Double): Double {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Accumulates value starting with the last element and applying [operation] from right to left to each element and current accumulator value.

Throws an exception if this array is empty. If the array can be empty in an expected way, please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.

**@param** [operation] function that takes an element and current accumulator value, and calculates the next accumulator value.

**@sample**

```

samples.collections.Collections.Aggregates.reduceRight
public inline fun BooleanArray.reduceRight(operation: (Boolean, acc: Boolean) -> Boolean): Boolean {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
    var accumulator =

```

```

get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If
the array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its
receiver is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun CharArray.reduceRight(operation:
(Char, acc: Char) -> Char): Char {\n var index = lastIndex\n if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = get(index--)\n while
(index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Throws an exception if this array is empty. If
the array can be empty in an expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null`
when its receiver is empty.\n * \n * @param [operation] function that takes the index of an element, the element
itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun <S, T : S> Array<out
T>.reduceRightIndexed(operation: (index: Int, T, acc: S) -> S): S {\n var index = lastIndex\n if (index < 0) throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator: S = get(index--)\n while
(index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use
[reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation]
function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n */\npublic
inline fun ByteArray.reduceRightIndexed(operation: (index: Int, Byte, acc: Byte) -> Byte): Byte {\n var index =
lastIndex\n if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var
accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index),
accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
ShortArray.reduceRightIndexed(operation: (index: Int, Short, acc: Short) -> Short): Short {\n var index =
lastIndex\n if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var
accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(index, get(index),
accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n *
\n * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
IntArray.reduceRightIndexed(operation: (index: Int, Int, acc: Int) -> Int): Int {\n var index = lastIndex\n if (index
< 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = get(index--)\n
while (index >= 0) {\n accumulator = operation(index, get(index), accumulator)\n --index\n }\n return

```

```

accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use
[reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation]
function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n */\npublic
inline fun LongArray.reduceRightIndexed(operation: (index: Int, Long, acc: Long) -> Long): Long {\n    var index =
lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n
* @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
FloatArray.reduceRightIndexed(operation: (index: Int, Float, acc: Float) -> Float): Float {\n    var index =
lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n
* @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
DoubleArray.reduceRightIndexed(operation: (index: Int, Double, acc: Double) -> Double): Double {\n    var index =
lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n
* @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
BooleanArray.reduceRightIndexed(operation: (index: Int, Boolean, acc: Boolean) -> Boolean): Boolean {\n    var
index = lastIndex\n    if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var
accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(index, get(index),
accumulator)\n        --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last
element and applying [operation] from right to left\n * to each element with its index in the original array and
current accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an
expected way,\n * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n
* @param [operation] function that takes the index of an element, the element itself and current accumulator
value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n */\npublic inline fun
CharArray.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {\n    var index = lastIndex\n
if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator =

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get(index--)\n  while (index >= 0) {\n    accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation]
from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the
element itself and current accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun <S,
T : S> Array<out T>.reduceRightIndexedOrNull(operation: (index: Int, T, acc: S) -> S): S? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator: S = get(index--)\n  while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun
ByteArray.reduceRightIndexedOrNull(operation: (index: Int, Byte, acc: Byte) -> Byte): Byte? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun
ShortArray.reduceRightIndexedOrNull(operation: (index: Int, Short, acc: Short) -> Short): Short? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun
IntArray.reduceRightIndexedOrNull(operation: (index: Int, Int, acc: Int) -> Int): Int? {\n  var index = lastIndex\n
if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator =
operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with the last element and applying [operation] from right to left\n * to each element with its index in
the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes the index of an element, the element itself and current accumulator value,\n * and
calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun
LongArray.reduceRightIndexedOrNull(operation: (index: Int, Long, acc: Long) -> Long): Long? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n */\n\n@SinceKotlin("1.4")\npublic inline fun
FloatArray.reduceRightIndexedOrNull(operation: (index: Int, Float, acc: Float) -> Float): Float? {\n  var index =
lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n

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accumulator = operation(index, get(index), accumulator)\n    --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n * \n @SinceKotlin("1.4")\npublic inline fun
DoubleArray.reduceRightIndexedOrNull(operation: (index: Int, Double, acc: Double) -> Double): Double? {\n    var
index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n * \n @SinceKotlin("1.4")\npublic inline fun
BooleanArray.reduceRightIndexedOrNull(operation: (index: Int, Boolean, acc: Boolean) -> Boolean): Boolean? {\n
var index = lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n * \n @SinceKotlin("1.4")\npublic inline fun
CharArray.reduceRightIndexedOrNull(operation: (index: Int, Char, acc: Char) -> Char): Char? {\n    var index =
lastIndex\n    if (index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n    --index\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S>
Array<out T>.reduceRightOrNull(operation: (T, acc: S) -> S): S? {\n    var index = lastIndex\n    if (index < 0)
return null\n    var accumulator: S = get(index--)\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ByteArray.reduceRightOrNull(operation: (Byte, acc: Byte) -> Byte): Byte? {\n    var index = lastIndex\n    if (index
< 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator =
operation(get(index--), accumulator)\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
ShortArray.reduceRightOrNull(operation: (Short, acc: Short) -> Short): Short? {\n    var index = lastIndex\n    if
(index < 0) return null\n    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator =

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operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
IntArray.reduceRightOrNull(operation: (Int, acc: Int) -> Int): Int? {\n var index = lastIndex\n if (index < 0)
return null\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--),
accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the last element and
applying [operation] from right to left\n * to each element and current accumulator value.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
LongArray.reduceRightOrNull(operation: (Long, acc: Long) -> Long): Long? {\n var index = lastIndex\n if
(index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator =
operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
FloatArray.reduceRightOrNull(operation: (Float, acc: Float) -> Float): Float? {\n var index = lastIndex\n if
(index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator =
operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the
last element and applying [operation] from right to left\n * to each element and current accumulator value.\n * \n *
Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and current
accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
DoubleArray.reduceRightOrNull(operation: (Double, acc: Double) -> Double): Double? {\n var index =
lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value
starting with the last element and applying [operation] from right to left\n * to each element and current accumulator
value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
BooleanArray.reduceRightOrNull(operation: (Boolean, acc: Boolean) -> Boolean): Boolean? {\n var index =
lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Accumulates value
starting with the last element and applying [operation] from right to left\n * to each element and current accumulator
value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes an element and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
CharArray.reduceRightOrNull(operation: (Char, acc: Char) -> Char): Char? {\n var index = lastIndex\n if (index
< 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n accumulator =

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operation(get(index--), accumulator)\n } \n return accumulator\n}\n\n/**\n * Returns a list containing successive
accumulation values generated by applying [operation] from left to right\n * to each element and current
accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should
not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.runningFold\n */\n\n@SinceKotlin("1.4")\npublic inline fun
<T, R> Array<out T>.runningFold(initial: R, operation: (acc: R, T) -> R): List<R> {\n if (isEmpty()) return
listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n for
(element in this) {\n accumulator = operation(accumulator, element)\n result.add(accumulator)\n }\n
return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n *
\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the
previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an
element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningFold\n */\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> ByteArray.runningFold(initial: R,
operation: (acc: R, Byte) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes current accumulator value and an element, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n */\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> ShortArray.runningFold(initial: R,
operation: (acc: R, Short) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes current accumulator value and an element, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n */\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> IntArray.runningFold(initial: R,
operation: (acc: R, Int) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size +
1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes current accumulator value and an element, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n */\n\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> LongArray.runningFold(initial: R,
operation: (acc: R, Long) -> R): List<R> {\n if (isEmpty()) return listOf(initial)\n val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n var accumulator = initial\n for (element in this) {\n accumulator =
operation(accumulator, element)\n result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]

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function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.runningFold

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*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> FloatArray.runningFold(initial: R,
operation: (acc: R, Float) -> R): List<R> {\n    if (isEmpty()) return listOf(initial)\n    val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n        accumulator =
operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element
and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes current accumulator value and an element, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold

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*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> DoubleArray.runningFold(initial: R,
operation: (acc: R, Double) -> R): List<R> {\n    if (isEmpty()) return listOf(initial)\n    val result =
ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n
accumulator = operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n *
Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to
each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n *
@param [operation] function that takes current accumulator value and an element, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold

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*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> BooleanArray.runningFold(initial:
R, operation: (acc: R, Boolean) -> R): List<R> {\n    if (isEmpty()) return listOf(initial)\n    val result =
ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n
accumulator = operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n *
Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to
each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n *
@param [operation] function that takes current accumulator value and an element, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold

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*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharArray.runningFold(initial: R,
operation: (acc: R, Char) -> R): List<R> {\n    if (isEmpty()) return listOf(initial)\n    val result = ArrayList<R>(size
+ 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n        accumulator =
operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element,
its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc`
value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in
resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n *
and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningFold

```

```

*\n@SinceKotlin("1.4")\npublic inline fun <T, R>
Array<out T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {\n    if (isEmpty())
return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n
for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation]
function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param
[operation] function that takes the index of an element, current accumulator value\n * and the element itself, and
calculates the

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next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ByteArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): List<R> {\n if (isEmpty())
return listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n
for (index in indices) {\n accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ShortArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): List<R> {\n if (isEmpty())
return listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n
for (index in indices) {\n accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
IntArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): List<R> {\n if (isEmpty()) return
listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n for
(index in indices) {\n accumulator = operation(index, accumulator, this[index])\n result.add(accumulator)\n
}\n return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\n * to each element, its index in the original array and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
LongArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Long) -> R): List<R> {\n if (isEmpty())
return listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n
for (index in indices) {\n accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function
should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun <R>
FloatArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Float) -> R): List<R> {\n if (isEmpty())
return listOf(initial)\n val result = ArrayList<R>(size + 1).apply { add(initial) }\n var accumulator = initial\n
for (index in indices) {\n accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n }\n return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function

```



samples.collections.Collections.Aggregates.runningReduce\n

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.runningReduce(operation: (acc: Short, Short) -> Short): List<Short> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Short>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.runningReduce(operation: (acc: Int, Int) -> Int): List<Int> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Int>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.runningReduce(operation: (acc: Long, Long) -> Long): List<Long> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Long>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.runningReduce(operation: (acc: Float, Float) -> Float): List<Float> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Float>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.runningReduce(operation: (acc: Double, Double) -> Double): List<Double> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Double>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.runningReduce(operation: (acc: Boolean, Boolean) -> Boolean): List<Boolean> {\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Boolean>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator\n
```

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value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.runningReduce(operation:
(acc: Char, Char) -> Char): List<Char> {\n  if (isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val
result = ArrayList<Char>(size).apply { add(accumulator) }\n  for (index in 1 until size) {\n    accumulator =
operation(accumulator, this[index])\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list
containing successive accumulation values generated by applying [operation] from left to right\n * to each element,
its index in the original array and current accumulator value that starts with the first element of this array.\n * \n *
Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the
previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current
accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\npublic inline fun <S, T :
S> Array<out T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): List<S> {\n  if (isEmpty()) return
emptyList()\n  var accumulator: S = this[0]\n  val result = ArrayList<S>(size).apply { add(accumulator) }\n  for
(index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.runningReduceIndexed(operation: (index: Int, acc: Byte, Byte) -> Byte): List<Byte> {\n  if (isEmpty())
return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Byte>(size).apply { add(accumulator)
}\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.runningReduceIndexed(operation: (index: Int, acc: Short, Short) -> Short): List<Short> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Short>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.runningReduceIndexed(operation: (index: Int, acc: Int, Int) -> Int): List<Int> {\n  if (isEmpty()) return
emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<Int>(size).apply { add(accumulator) }\n  for
(index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.runningReduceIndexed(operation: (index: Int, acc: Long, Long) -> Long): List<Long> {\n  if

```

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(isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Long>(size).apply {
add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.runningReduceIndexed(operation: (index: Int, acc: Float, Float) -> Float): List<Float> {\n    if
(isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Float>(size).apply {
add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n
        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.runningReduceIndexed(operation: (index: Int, acc: Double, Double) -> Double): List<Double> {\n    if
(isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Double>(size).apply {
add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n
        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * @param [operation] function that
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
BooleanArray.runningReduceIndexed(operation: (index: Int, acc: Boolean, Boolean) -> Boolean): List<Boolean>
{\n    if (isEmpty()) return emptyList()\n    var accumulator = this[0]\n    val result =
ArrayList<Boolean>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator =
operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n *
Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to
each element, its index in the original array and current accumulator value that starts with the first element of this
array.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and
the element itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*/\n@SinceKotlin("1.4")\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.runningReduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): List<Char> {\n    if (isEmpty())
return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<Char>(size).apply { add(accumulator)
}\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*/\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <T, R>
Array<out T>.scan(initial: R, operation: (acc: R, T) -> R): List<R> {\n    return runningFold(initial,
operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation]

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from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> ByteArray.scan(initial: R, operation: (acc: R, Byte) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> ShortArray.scan(initial: R, operation: (acc: R, Short) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> IntArray.scan(initial: R, operation: (acc: R, Int) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> LongArray.scan(initial: R, operation: (acc: R, Long) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> FloatArray.scan(initial: R, operation: (acc: R, Float) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n \* \n \* \n \* @SinceKotlin("1.4")\n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* @kotlin.internal.InlineOnly\n \* public inline fun <R> DoubleArray.scan(initial: R, operation: (acc: R, Double) -> R): List<R> {\n \* return runningFold(initial, operation)\n \* }\n \* \n \* \n \* Returns a list containing successive accumulation values generated by applying [operation] from left to right\n \* to each element and current accumulator value that starts with [initial] value.\n \* \n \* Note that `acc` value passed to [operation] function should not be mutated;\n \* otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value

and an element, and calculates the next accumulator value.

```

@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> BooleanArray.scan(initial: R, operation: (acc: R, Boolean) -> R): List<R> {
    return runningFold(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> CharArray.scan(initial: R, operation: (acc: R, Char) -> R): List<R> {
    return runningFold(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public inline fun <T, R> Array<out T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> ByteArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Byte) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> ShortArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Short) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
@sample
samples.collections.Collections.Aggregates.scan
*/
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <R> IntArray.scanIndexed(initial: R, operation: (index: Int, acc: R, Int) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}
*/
Returns a list containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original array and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.
@param [operation]

```



```

selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
IntArray.sumBy(selector: (Int) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
LongArray.sumBy(selector: (Long) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
FloatArray.sumBy(selector: (Float) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
DoubleArray.sumBy(selector: (Double) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
BooleanArray.sumBy(selector: (Boolean) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
CharArray.sumBy(selector: (Char) -> Int): Int {\n var sum: Int = 0\n for (element in this) {\n sum +=
selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function
applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun <T>
Array<out T>.sumByDouble(selector: (T) -> Double): Double {\n var sum: Double = 0.0\n for (element in this)
{\n sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
ByteArray.sumByDouble(selector: (Byte) -> Double): Double {\n var sum: Double = 0.0\n for (element in this)
{\n sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
ShortArray.sumByDouble(selector: (Short) -> Double): Double {\n var sum: Double = 0.0\n for (element in this)
{\n sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
IntArray.sumByDouble(selector: (Int) -> Double): Double {\n var sum: Double = 0.0\n for (element in this) {\n
sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]
function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
LongArray.sumByDouble(selector: (Long) -> Double): Double {\n var sum: Double = 0.0\n for (element in this)
{\n sum += selector(element)\n } \n return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead.\",
ReplaceWith("this.sumOf(selector)\"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
FloatArray.sumByDouble(selector: (Float) -> Double): Double {\n var sum: Double = 0.0\n for (element in this)

```

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{\n    sum += selector(element)\n } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead."),
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
DoubleArray.sumByDouble(selector: (Double) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in
this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead."),
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
BooleanArray.sumByDouble(selector: (Boolean) -> Double): Double {\n    var sum: Double = 0.0\n    for (element
in this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced
by [selector] function applied to each element in the array.\n */\n@Deprecated("Use sumOf instead."),
ReplaceWith("this.sumOf(selector)\")\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic inline fun
CharArray.sumByDouble(selector: (Char) -> Double): Double {\n    var sum: Double = 0.0\n    for (element in this)
{\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
<T> Array<out T>.sumOf(selector: (T) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element
in this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced
by [selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.sumOf(selector: (Byte) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in
this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.sumOf(selector: (Short) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in
this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.sumOf(selector: (Int) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this)
{\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.sumOf(selector: (Long) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in
this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.sumOf(selector: (Float) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in
this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced by
[selector] function applied to each element in the array.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.sumOf(selector: (Double) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element
in this) {\n        sum += selector(element)\n    } \n    return sum\n}\n\n/**\n * Returns the sum of all values produced

```

by [selector] function applied to each element in the array.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun\nBooleanArray.sumOf(selector: (Boolean) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for\n(element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values\n produced by [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfDouble")\n@kotlin.internal.InlineOnly\npublic inline fun\nCharArray.sumOf(selector: (Char) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in\nthis) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by\n [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun <T>\nArray<out T>.sumOf(selector: (T) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nByteArray.sumOf(selector: (Byte) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nShortArray.sumOf(selector: (Short) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nIntArray.sumOf(selector: (Int) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nLongArray.sumOf(selector: (Long) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nFloatArray.sumOf(selector: (Float) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun\nDoubleArray.sumOf(selector: (Double) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector]\n function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfInt")\n@kotlin.internal.InlineOnly\npublic inline fun
```

```

BooleanArray.sumOf(selector: (Boolean) -> Int): Int {
    var sum: Int = 0.toInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfInt")
@kotlin.internal.InlineOnly
public inline fun CharArray.sumOf(selector: (Char) -> Int): Int {
    var sum: Int = 0.toInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun <T> Array<out T>.sumOf(selector: (T) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun ByteArray.sumOf(selector: (Byte) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun ShortArray.sumOf(selector: (Short) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun IntArray.sumOf(selector: (Int) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun LongArray.sumOf(selector: (Long) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun FloatArray.sumOf(selector: (Float) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun DoubleArray.sumOf(selector: (Double) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfLong")
@kotlin.internal.InlineOnly
public inline fun BooleanArray.sumOf(selector: (Boolean) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 */

```

\*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun  
CharArray.sumOf(selector: (Char) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector]  
function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.sumOf(selector: (T) -> UInt): UInt {\n var sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return  
sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the  
array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.sumOf(selector: (Byte) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.sumOf(selector: (Short) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.sumOf(selector: (Int) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.sumOf(selector: (Long) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.sumOf(selector: (Float) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.sumOf(selector: (Double) -> UInt): UInt {\n var  
sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return  
sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the  
array.\n

\*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution  
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType  
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.sumOf(selector: (Boolean) -> UInt): UInt  
{\n var sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return  
sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the  
array.\n

```

*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.sumOf(selector: (Char) -> UInt): UInt {\n  var
sum: UInt = 0.toUInt()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return sum\n}\n\n/**\n *
Returns the sum of all values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Array<out T>.sumOf(selector: (T) -> ULong):
ULong {\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n
return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in
the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.sumOf(selector: (Byte) -> ULong): ULong
{\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ShortArray.sumOf(selector: (Short) -> ULong): ULong
{\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun IntArray.sumOf(selector: (Int) -> ULong): ULong {\n
var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun LongArray.sumOf(selector: (Long) -> ULong): ULong
{\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun FloatArray.sumOf(selector: (Float) -> ULong): ULong
{\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n  return
sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun DoubleArray.sumOf(selector: (Double) -> ULong):
ULong {\n  var sum: ULong = 0.toULong()\n  for (element in this) {\n    sum += selector(element)\n  }\n
return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in
the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun BooleanArray.sumOf(selector: (Boolean) -> ULong):
ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in
the array.\n
*/\n\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharArray.sumOf(selector: (Char) -> ULong): ULong
{\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return
sum\n}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an
[IllegalArgumentException] if there are any `null` elements.\n
*/\n\npublic fun <T : Any>
Array<T?>.requireNoNulls(): Array<T> {\n    for (element in this) {\n        if (element == null) {\n            throw
IllegalArgumentException("null element found in $this.")\n        }\n    }\n
}\n\n@Suppress("\UNCHECKED_CAST")\n    return this as Array<T>\n}\n\n/**\n * Splits the original array into pair
of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains
elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun <T> Array<out
T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {\n    val first = ArrayList<T>()\n    val second =
ArrayList<T>()\n    for (element in this) {\n        if (predicate(element)) {\n            first.add(element)\n        } else {\n
            second.add(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair
of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains
elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun
ByteArray.partition(predicate: (Byte) -> Boolean): Pair<List<Byte>, List<Byte>> {\n    val first =
ArrayList<Byte>()\n    val second = ArrayList<Byte>()\n    for (element in this) {\n        if (predicate(element)) {\n
            first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
*/\n\n@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun
ShortArray.partition(predicate: (Short) -> Boolean): Pair<List<Short>, List<Short>> {\n    val first =
ArrayList<Short>()\n    val second = ArrayList<Short>()\n    for (element in this) {\n        if (predicate(element)) {\n
            first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
*/\n\n@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun
IntArray.partition(predicate: (Int) -> Boolean): Pair<List<Int>, List<Int>> {\n    val first = ArrayList<Int>()\n    val
second = ArrayList<Int>()\n    for (element in this) {\n        if (predicate(element)) {\n            first.add(element)\n
        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original
array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while
*second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample
samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun
LongArray.partition(predicate: (Long) -> Boolean): Pair<List<Long>, List<Long>> {\n    val first =
ArrayList<Long>()\n    val second = ArrayList<Long>()\n    for (element in this) {\n        if (predicate(element)) {\n
            first.add(element)\n        } else {\n            second.add(element)\n        }\n    }\n    return Pair(first,
second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which
[predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n *
*/\n\n@sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n
*/\n\npublic inline fun
FloatArray.partition(predicate: (Float) -> Boolean): Pair<List<Float>, List<Float>> {\n    val first =

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ArrayList<Float>()\n  val second = ArrayList<Float>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun DoubleArray.partition(predicate: (Double) -> Boolean): Pair<List<Double>, List<Double>> {\n  val first = ArrayList<Double>()\n  val second = ArrayList<Double>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun BooleanArray.partition(predicate: (Boolean) -> Boolean): Pair<List<Boolean>, List<Boolean>> {\n  val first = ArrayList<Boolean>()\n  val second = ArrayList<Boolean>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Splits the original array into pair of lists,\n * where *first* list contains elements for which [predicate] yielded `true`,\n * while *second* list contains elements for which [predicate] yielded `false`.\n * \n * @sample samples.collections.Arrays.Transformations.partitionArrayOfPrimitives\n */\npublic inline fun CharArray.partition(predicate: (Char) -> Boolean): Pair<List<Char>, List<Char>> {\n  val first = ArrayList<Char>()\n  val second = ArrayList<Char>()\n  for (element in this) {\n    if (predicate(element)) {\n      first.add(element)\n    } else {\n      second.add(element)\n    }\n  }\n  return Pair(first, second)\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <T, R> Array<out T>.zip(other: Array<out R>): List<Pair<T, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ByteArray.zip(other: Array<out R>): List<Pair<Byte, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> ShortArray.zip(other: Array<out R>): List<Pair<Short, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> IntArray.zip(other: Array<out R>): List<Pair<Int, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> LongArray.zip(other: Array<out R>): List<Pair<Long, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> FloatArray.zip(other: Array<out R>): List<Pair<Float, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> DoubleArray.zip(other: Array<out R>): List<Pair<Double, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\npublic infix fun <R> BooleanArray.zip(other: Array<out R>): List<Pair<Boolean, R>> {\n  return zip(other) { t1, t2 -> t1 to t2 }

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}
}

Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterable

public infix fun <R> CharArray.zip(other: Array<out R>): List<Pair<Char, R>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <T, R, V> Array<out T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> ByteArray.zip(other: Array<out R>, transform: (a: Byte, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> ShortArray.zip(other: Array<out R>, transform: (a: Short, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> IntArray.zip(other: Array<out R>, transform: (a: Int, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> LongArray.zip(other: Array<out R>, transform: (a: Long, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> FloatArray.zip(other: Array<out R>, transform: (a: Float, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> DoubleArray.zip(other: Array<out R>, transform: (a: Double, b: R) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

Returns a list of values built from the elements of `this` array and the [other] array with the same index
using the provided [transform] function applied to each pair of elements.
The returned list has length of the shortest collection.
@sample
samples.collections.Iterables.Operations.zipIterableWithTransform

public inline fun <R, V> BooleanArray.zip(other: Array<out R>, transform: (a: Boolean, b: R) -> V): List<V> {
    val size = minOf(size,

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other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array\n * with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned\n * list has length of the\n * shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * \npublic inline fun <R, V>
CharArray.zip(other: Array<out R>, transform: (a: Char, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with\n * the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <T, R> Array<out T>.zip(other:
Iterable<R>): List<Pair<T, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built\n * from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of the\n * shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
ByteArray.zip(other: Iterable<R>): List<Pair<Byte, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The\n * returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
ShortArray.zip(other: Iterable<R>): List<Pair<Short, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the\n * elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest\n * collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
IntArray.zip(other: Iterable<R>): List<Pair<Int, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The\n * returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
LongArray.zip(other: Iterable<R>): List<Pair<Long, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the\n * elements of `this` collection and [other] array with the same index.\n * The returned list has length of the shortest\n * collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
FloatArray.zip(other: Iterable<R>): List<Pair<Float, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same index.\n * The\n * returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
DoubleArray.zip(other:
Iterable<R>): List<Pair<Double, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs\n * built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of\n * the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun
<R> BooleanArray.zip(other: Iterable<R>): List<Pair<Boolean, R>> {\n    return zip(other) { t1, t2 -> t1 to t2\n    }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with the same\n * index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n * \npublic infix fun <R>
CharArray.zip(other: Iterable<R>): List<Pair<Char, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the\n * elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function\n * applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * \npublic inline fun <T, R, V> Array<out
T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a\n * list of values built from the elements of `this` array and the [other] collection with the same index\n * using the\n * provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest\n * collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n * \npublic inline

```



```

list<T, U> zip(other: List<U>): List<Pair<T, U>>
 * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
 * index.
 * The returned list has length of the shortest collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun ByteArray.zip(other: ByteArray):
List<Pair<Byte, Byte>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from
 * the elements of `this` array and the [other] array with the same index.
 * The returned list has length of the shortest
 * collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun
ShortArray.zip(other: ShortArray): List<Pair<Short, Short>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.
 * The
 * returned list has length of the shortest collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun IntArray.zip(other: IntArray):
List<Pair<Int, Int>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from the
 * elements of `this` array and the [other] array with the same index.
 * The returned list has length of the shortest
 * collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun
LongArray.zip(other: LongArray): List<Pair<Long, Long>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.
 * The
 * returned list has length of the shortest collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun FloatArray.zip(other: FloatArray):
List<Pair<Float, Float>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from
 * the elements of `this` array and the [other] array with the same index.
 * The returned list has length of the shortest
 * collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun
DoubleArray.zip(other: DoubleArray): List<Pair<Double, Double>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built from the elements of `this` array and the [other] array with the same
 * index.
 * The returned list has length of the shortest collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun BooleanArray.zip(other: BooleanArray):
List<Pair<Boolean, Boolean>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of pairs built
 * from the elements of `this` array and the [other] array with the same index.
 * The returned list has length of the
 * shortest collection.
 * @sample
samples.collections.Iterables.Operations.zipIterable<T, U>()

public infix fun
CharArray.zip(other: CharArray): List<Pair<Char, Char>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

 * Returns a list of values built from the elements of `this` array and the [other] array with the same index
 * using the
 * provided [transform] function applied to each pair of elements.
 * The returned list has length of the shortest
 * array.
 * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform<T, U, V>()

public inline fun
<V> ByteArray.zip(other: ByteArray, transform: (a: Byte, b: Byte) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

 * Returns a list of values built from the elements of `this` array and the [other] array
 * with the same index
 * using the provided [transform] function applied to each pair of elements.
 * The returned
 * list has length of the shortest array.
 * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform<T, U, V>()

public inline fun <V>
ShortArray.zip(other: ShortArray, transform: (a: Short, b: Short) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

 * Returns a list of values built from the elements of `this` array and the [other] array
 * with the same index
 * using the provided [transform] function applied to each pair of elements.
 * The returned
 * list has length of the shortest array.
 * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform<T, U, V>()

public inline fun <V>
IntArray.zip(other: IntArray, transform: (a: Int, b: Int) -> V): List<V> {
    val size = minOf(size, other.size)
    val list =
    ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return
    list
}

 * Returns a list of values built from the elements of `this` array and the [other] array with the same
 * index
 * using the provided [transform] function applied to each pair of elements.
 * The returned list has length
 * of the shortest array.
 * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform<T, U, V>()

```

```

*public inline fun <V> LongArray.zip(other: LongArray, transform: (a: Long, b: Long) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

```

\* Returns a list of values built from the elements of `this` array and the [other] array with the same index  
 \* using the provided [transform] function applied to each pair of elements.  
 \* The returned list has length of the shortest array.  
 \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform

```

*public inline fun <V> FloatArray.zip(other: FloatArray, transform: (a: Float, b: Float) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

```

\* Returns a list of values built from the elements of `this` array and the [other] array with the same index  
 \* using the provided [transform] function applied to each pair of elements.  
 \* The returned list has length of the shortest array.  
 \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform

```

*public inline fun <V> DoubleArray.zip(other: DoubleArray, transform: (a: Double, b: Double) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

```

\* Returns a list of values built from the elements of `this` array and the [other] array with the same index  
 \* using the provided [transform] function applied to each pair of elements.  
 \* The returned list has length of the shortest array.  
 \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform

```

*public inline fun <V> BooleanArray.zip(other: BooleanArray, transform: (a: Boolean, b: Boolean) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

```

\* Returns a list of values built from the elements of `this` array and the [other] array with the same index  
 \* using the provided [transform] function applied to each pair of elements.  
 \* The returned list has length of the shortest array.  
 \* @sample samples.collections.Iterables.Operations.zipIterableWithTransform

```

*public inline fun <V> CharArray.zip(other: CharArray, transform: (a: Char, b: Char) -> V): List<V> {
    val size = minOf(size, other.size)
    val list = ArrayList<V>(size)
    for (i in 0 until size) {
        list.add(transform(this[i], other[i]))
    }
    return list
}

```

\* Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.  
 \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").  
 \* @sample samples.collections.Collections.Transformations.joinTo

```

*public fun <T, A : Appendable> Array<out T>.joinTo(buffer: A, separator: CharSequence = "\n", prefix: CharSequence = "\n", postfix: CharSequence = "\n", limit: Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): A {
    buffer.append(prefix)
    var count = 0
    for (element in this) {
        if (++count > 1)
            buffer.append(separator)
        if (limit < 0 || count <= limit) {
            buffer.appendElement(element, transform)
        } else break
    }
    if (limit >= 0 && count > limit) buffer.append(truncated)
    buffer.append(postfix)
    return buffer
}

```

\* Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.  
 \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").  
 \* @sample samples.collections.Collections.Transformations.joinTo

```

*public fun <A : Appendable> ByteArray.joinTo(buffer: A, separator: CharSequence = "\n", prefix: CharSequence = "\n", postfix: CharSequence = "\n", limit: Int = -1, truncated: CharSequence = "...", transform: ((Byte) -> CharSequence)? = null): A {
    buffer.append(prefix)
    var count = 0
    for (element in this) {
        if (++count > 1)
            buffer.append(separator)
        if (limit < 0 || count <= limit) {
            if (transform != null)
                buffer.append(transform(element))
            else
                buffer.append(element.toString())
        } else break
    }
    if (limit >= 0 && count > limit) buffer.append(truncated)
    buffer.append(postfix)
    return buffer
}

```

\* Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.  
 \* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which

```

defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> ShortArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Short) -> CharSequence)? =
null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\nbuffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n
}\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer}\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> IntArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Int) -> CharSequence)? = null):
A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\nbuffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n
}\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer}\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> LongArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Long) -> CharSequence)? =
null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\nbuffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n
}\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer}\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> FloatArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Float) -> CharSequence)? =
null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\nbuffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n
}\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer}\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> DoubleArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Double) -> CharSequence)? =
null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\nbuffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n
}\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer}\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given

```

[prefix] and [postfix] if supplied.

```

\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> BooleanArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"",
postfix: CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Boolean) ->
CharSequence)? = null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count
> 1) buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\n        buffer.append(transform(element))\n      else\n        buffer.append(element.toString())\n    } else break\n  }\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return
buffer\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given
[prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of
[limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which
defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n * \npublic fun <A :
Appendable> CharArray.joinTo(buffer: A, separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix:
CharSequence = "\"", limit: Int = -1, truncated: CharSequence = "...", transform: ((Char) -> CharSequence)? =
null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1)
buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      if (transform != null)\n        buffer.append(transform(element))\n      else\n        buffer.append(element)\n    } else break\n  }\n  if
(limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if
supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only
the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to "...").\n * \n *
@sample samples.collections.Collections.Transformations.joinToString\n * \npublic fun <T> Array<out
T>.joinToString(separator: CharSequence = "\", \", prefix: CharSequence = "\"", postfix: CharSequence = "\"", limit:
Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): String {\n  return
joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a
string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n
* If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first
[limit]\n * elements will be appended, followed by the [truncated] string (which defaults to "...").\n * \n * @sample
samples.collections.Collections.Transformations.joinToString\n * \npublic fun ByteArray.joinToString(separator:
CharSequence = "\", \", prefix: CharSequence = "\"", postfix: CharSequence = "\"", limit: Int = -1, truncated:
CharSequence = "...", transform: ((Byte) -> CharSequence)? = null): String {\n  return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements
separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be
huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be
appended, followed by the [truncated] string (which defaults to "...").\n * \n * @sample
samples.collections.Collections.Transformations.joinToString\n * \npublic fun ShortArray.joinToString(separator:
CharSequence = "\", \", prefix: CharSequence = "\"", postfix: CharSequence = "\"", limit: Int = -1, truncated:
CharSequence = "...", transform: ((Short) -> CharSequence)? = null): String {\n  return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements
separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be
huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be
appended, followed by the [truncated] string (which defaults to "...").\n * \n * @sample
samples.collections.Collections.Transformations.joinToString\n * \npublic fun IntArray.joinToString(separator:
CharSequence = "\", \", prefix: CharSequence = "\"", postfix: CharSequence = "\"", limit: Int = -1, truncated:
CharSequence = "...", transform: ((Int) -> CharSequence)? = null): String {\n  return joinTo(StringBuilder(),
separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Creates a string from all the elements
separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be

```

huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").

```

samples.collections.Collections.Transformations.joinToString
*/
public fun LongArray.joinToString(separator: CharSequence = ", ", prefix: CharSequence = "", postfix: CharSequence = "", limit: Int = -1, truncated: CharSequence = "..."): String {
    return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}
*/
Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.
If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").
*/
samples.collections.Collections.Transformations.joinToString
*/
public fun FloatArray.joinToString(separator: CharSequence = ", ", prefix: CharSequence = "", postfix: CharSequence = "", limit: Int = -1, truncated: CharSequence = "..."): String {
    return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}
*/
Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.
If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").
*/
samples.collections.Collections.Transformations.joinToString
*/
public fun DoubleArray.joinToString(separator: CharSequence = ", ", prefix: CharSequence = "", postfix: CharSequence = "", limit: Int = -1, truncated: CharSequence = "..."): String {
    return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}
*/
Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.
If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").
*/
samples.collections.Collections.Transformations.joinToString
*/
public fun BooleanArray.joinToString(separator: CharSequence = ", ", prefix: CharSequence = "", postfix: CharSequence = "", limit: Int = -1, truncated: CharSequence = "..."): String {
    return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}
*/
Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.
If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").
*/
samples.collections.Collections.Transformations.joinToString
*/
public fun CharArray.joinToString(separator: CharSequence = ", ", prefix: CharSequence = "", postfix: CharSequence = "", limit: Int = -1, truncated: CharSequence = "..."): String {
    return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun <T> Array<out T>.asIterable(): Iterable<T> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun ByteArray.asIterable(): Iterable<Byte> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun ShortArray.asIterable(): Iterable<Short> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun IntArray.asIterable(): Iterable<Int> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun LongArray.asIterable(): Iterable<Long> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun FloatArray.asIterable(): Iterable<Float> {
    if (isEmpty()) return emptyList()
    return Iterable { this.iterator() }
}
*/
Creates an [Iterable] instance that wraps the original array returning its elements when being iterated.
*/
public fun

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DoubleArray.asIterable(): Iterable<Double> {\n  if (isEmpty()) return emptyList()\n  return Iterable {
this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original array returning its elements when
being iterated.\n */\npublic fun BooleanArray.asIterable(): Iterable<Boolean> {\n  if (isEmpty()) return
emptyList()\n  return Iterable { this.iterator() }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original
array returning its elements when being iterated.\n */\npublic fun CharArray.asIterable(): Iterable<Char> {\n  if
(isEmpty()) return emptyList()\n  return Iterable { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that
wraps the original array returning its elements when being iterated.\n */\n * @sample
samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun <T> Array<out T>.asSequence():
Sequence<T> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun ByteArray.asSequence():
Sequence<Byte> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun ShortArray.asSequence():
Sequence<Short> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun IntArray.asSequence():
Sequence<Int> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun LongArray.asSequence():
Sequence<Long> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun FloatArray.asSequence():
Sequence<Float> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun DoubleArray.asSequence():
Sequence<Double> {\n  if (isEmpty()) return emptySequence()\n  return Sequence { this.iterator() }\n}\n\n/**\n *
Creates a [Sequence] instance that wraps the original array returning its elements when being iterated.\n */\n *
@sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic fun
BooleanArray.asSequence(): Sequence<Boolean> {\n  if (isEmpty()) return emptySequence()\n  return Sequence
{ this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original array returning its elements
when being iterated.\n */\n * @sample samples.collections.Sequences.Building.sequenceFromArray\n */\npublic
fun CharArray.asSequence(): Sequence<Char> {\n  if (isEmpty()) return emptySequence()\n  return Sequence {
this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n\n@kotlin.jvm.JvmName("averageOfByte")\npublic fun Array<out Byte>.average(): Double {\n  var sum:
Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    ++count\n  }\n  return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n\n@kotlin.jvm.JvmName("averageOfShort")\npublic fun Array<out Short>.average(): Double {\n  var sum:
Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    ++count\n  }\n  return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n\n@kotlin.jvm.JvmName("averageOfInt")\npublic fun Array<out Int>.average(): Double {\n  var sum: Double
= 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    ++count\n  }\n  return if (count
== 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n\n@kotlin.jvm.JvmName("averageOfLong")\npublic fun Array<out Long>.average(): Double {\n  var sum:
Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    ++count\n  }\n  return
if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the array.\n */\n\n@kotlin.jvm.JvmName("averageOfFloat")\npublic fun Array<out Float>.average(): Double {\n  var sum:
Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    ++count\n  }\n  return

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if (count == 0) Double.NaN else sum / count\n\n\n * Returns an average value of elements in the array.\n
*\n@kotlin.jvm.JvmName("\averageOfDouble")\npublic fun Array<out Double>.average(): Double {\n    var sum:
Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n        ++count\n    }\n    return
if (count == 0) Double.NaN else sum / count\n\n\n * Returns an average value of elements in the array.\n
*\npublic fun ByteArray.average(): Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in
this) {\n        sum += element\n        ++count\n    }\n    return if (count == 0) Double.NaN else sum /
count\n\n\n * Returns an average value of elements in the array.\n *\npublic fun ShortArray.average():
Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
++count\n    }\n    return if (count == 0) Double.NaN else sum / count\n\n\n * Returns an average value of
elements in the array.\n *\npublic fun IntArray.average(): Double {\n    var sum: Double = 0.0\n    var count: Int =
0\n    for (element in this) {\n        sum += element\n        ++count\n    }\n    return if (count == 0) Double.NaN else
sum / count\n\n\n * Returns an average value of elements in the array.\n *\npublic fun LongArray.average():
Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
++count\n    }\n    return if (count == 0) Double.NaN else sum / count\n\n\n * Returns an average value of
elements in the array.\n *\npublic fun FloatArray.average(): Double {\n    var sum: Double = 0.0\n    var count: Int
= 0\n    for (element in this) {\n        sum += element\n        ++count\n    }\n    return if (count == 0) Double.NaN
else sum / count\n\n\n * Returns an average value of elements in the array.\n *\npublic fun
DoubleArray.average(): Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n
sum += element\n        ++count\n    }\n    return if (count == 0) Double.NaN else sum / count\n\n\n * Returns
the sum of all elements in the array.\n *\n@kotlin.jvm.JvmName("sumOfByte")\npublic fun Array<out
Byte>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    }\n    return
sum\n}\n\n\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfShort")\npublic fun Array<out Short>.sum(): Int {\n    var sum: Int = 0\n    for
(element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the sum of all elements in the
array.\n *\n@kotlin.jvm.JvmName("sumOfInt")\npublic fun Array<out Int>.sum(): Int {\n    var sum: Int = 0\n
for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the sum of all elements in
the array.\n *\n@kotlin.jvm.JvmName("sumOfLong")\npublic fun Array<out Long>.sum(): Long {\n    var sum:
Long = 0L\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the sum of
all elements in the array.\n *\n@kotlin.jvm.JvmName("sumOfFloat")\npublic fun Array<out Float>.sum(): Float
{\n    var sum: Float = 0.0f\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n *
Returns the sum of all elements in the array.\n *\n@kotlin.jvm.JvmName("sumOfDouble")\npublic fun Array<out
Double>.sum(): Double {\n    var sum: Double = 0.0\n    for (element in this) {\n        sum += element\n    }\n
return sum\n}\n\n\n * Returns the sum of all elements in the array.\n *\npublic fun ByteArray.sum(): Int {\n
var sum: Int = 0\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the
sum of all elements in the array.\n *\npublic fun ShortArray.sum(): Int {\n    var sum: Int = 0\n    for (element in
this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the sum of all elements in the array.\n
*\npublic fun IntArray.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    }\n
return sum\n}\n\n\n * Returns the sum of all elements in the array.\n *\npublic fun LongArray.sum(): Long {\n
var sum: Long = 0L\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the
sum of all elements in the array.\n *\npublic fun FloatArray.sum(): Float {\n    var sum: Float = 0.0f\n    for
(element in this) {\n        sum += element\n    }\n    return sum\n}\n\n\n * Returns the sum of all elements in the
array.\n *\npublic fun DoubleArray.sum(): Double {\n    var sum: Double = 0.0\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("RangesKt")\n\npackage
kotlin.ranges\n\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n\nimport kotlin.random.*\n\n\n * Returns a

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random element from this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun IntRange.random(): Int {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this range.\n * \n * @throws
IllegalArgumentException if this range is empty.\n * \n *\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic
inline fun LongRange.random(): Long {\n    return random(Random)\n}\n\n/**\n * Returns a random element from
this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun CharRange.random(): Char {\n    return
random(Random)\n}\n\n/**\n * Returns a random element from this range using the specified source of
randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.3")\npublic fun IntRange.random(random: Random): Int {\n    try {\n        return
random.nextInt(this)\n    } catch(e: IllegalArgumentException) {\n        throw
NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a random element from this range using the
specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.3")\npublic fun LongRange.random(random: Random): Long {\n    try {\n        return
random.nextLong(this)\n    } catch(e: IllegalArgumentException) {\n        throw
NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a random element from this range using the
specified source of randomness.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.3")\npublic fun CharRange.random(random: Random): Char {\n    try {\n        return
random.nextInt(first.code, last.code + 1).toChar()\n    } catch(e: IllegalArgumentException) {\n        throw
NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a random element from this range, or `null` if this
range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun IntRange.randomOrNull(): Int? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random
element from this range, or `null` if this range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun LongRange.randomOrNull(): Long? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this range, or `null` if this range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c inline fun CharRange.randomOrNull(): Char? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a
random element from this range using the specified source of randomness, or `null` if this range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
IntRange.randomOrNull(random: Random): Int? {\n    if (isEmpty())\n        return null\n    return
random.nextInt(this)\n}\n\n/**\n * Returns a random element from this range using the specified source of
randomness, or `null` if this range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
LongRange.randomOrNull(random: Random): Long? {\n    if (isEmpty())\n        return null\n    return
random.nextLong(this)\n}\n\n/**\n * Returns a random element from this range using the specified source of
randomness, or `null` if this range is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun
CharRange.randomOrNull(random: Random): Char? {\n    if (isEmpty())\n        return null\n    return
random.nextInt(first.code, last.code + 1).toChar()\n}\n\n/**\n * Returns `true` if this range contains the specified
[element].\n * \n * Always returns `false` if the [element] is `null`.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline operator fun IntRange.contains(element:
Int?): Boolean {\n    return element != null && contains(element)\n}\n\n/**\n * Returns `true` if this range contains
the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline operator fun LongRange.contains(element:
Long?): Boolean {\n    return element != null && contains(element)\n}\n\n/**\n * Returns `true` if this range
contains the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n

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*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline operator fun CharRange.contains(element: Char?): Boolean {\n    return element != null && contains(element)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value: Byte): Boolean {\n    return contains(value.toInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun ClosedRange<Long>.contains(value: Byte): Boolean {\n    return contains(value.toLong())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName("shortRangeContains")\npublic operator fun ClosedRange<Short>.contains(value: Byte): Boolean {\n    return contains(value.toShort())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("doubleRangeContains")\npublic operator fun ClosedRange<Double>.contains(value: Byte): Boolean {\n    return contains(value.toDouble())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun ClosedRange<Float>.contains(value: Byte): Boolean {\n    return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value: Double): Boolean {\n    return value.toIntExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun ClosedRange<Long>.contains(value: Double): Boolean {\n    return value.toLongExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("byteRangeContains")\npublic operator fun ClosedRange<Byte>.contains(value: Double): Boolean {\n    return value.toByteExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("shortRangeContains")\npublic operator fun ClosedRange<Short>.contains(value: Double): Boolean {\n    return value.toShortExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun ClosedRange<Float>.contains(value: Double): Boolean {\n    return contains(value.toFloat())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value: Float): Boolean {\n    return value.toIntExactOrNull().let { if (it != null) contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n */\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince = "1.5")\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun

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range.\n *\n@kotlin.jvm.JvmName("intRangeContains")\npublic operator fun ClosedRange<Int>.contains(value:
Short): Boolean {\n  return contains(value.toInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this
range.\n *\n@kotlin.jvm.JvmName("longRangeContains")\npublic operator fun
ClosedRange<Long>.contains(value: Short): Boolean {\n  return contains(value.toLong())\n}\n\n/**\n * Checks if
the specified [value] belongs to this range.\n *\n@kotlin.jvm.JvmName("byteRangeContains")\npublic operator
fun ClosedRange<Byte>.contains(value: Short): Boolean {\n  return value.toByteExactOrNull().let { if (it != null)
contains(it) else false }\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*\n@Deprecated("This `contains` operation mixing integer and floating point arguments has ambiguous semantics
and is going to be removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince
= "1.5")\n@kotlin.jvm.JvmName("doubleRangeContains")\npublic operator fun
ClosedRange<Double>.contains(value: Short): Boolean {\n  return contains(value.toDouble())\n}\n\n/**\n *
Checks if the specified [value] belongs to this range.\n *\n@Deprecated("This `contains` operation mixing integer
and floating point arguments has ambiguous semantics and is going to be
removed.")\n@DeprecatedSinceKotlin(warningSince = "1.3", errorSince = "1.4", hiddenSince =
"1.5")\n@kotlin.jvm.JvmName("floatRangeContains")\npublic operator fun ClosedRange<Float>.contains(value:
Short): Boolean {\n  return contains(value.toFloat())\n}\n\n/**\n * Returns a progression from this value down to
the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n *
If the [to] value is greater than `this` value the returned progression is empty.\n *\npublic infix fun Int.downTo(to: Byte):
IntProgression {\n  return IntProgression.fromClosedRange(this, to.toInt(), -1)\n}\n\n/**\n * Returns a progression
from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal
to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n *\npublic infix
fun Long.downTo(to: Byte): LongProgression {\n  return LongProgression.fromClosedRange(this, to.toLong(), -
1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n *
The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the
returned progression is empty.\n *\npublic infix fun Byte.downTo(to: Byte): IntProgression {\n  return
IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)\n}\n\n/**\n * Returns a progression from this value
down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n
* If the [to] value is greater than `this` value the returned progression is empty.\n *\npublic infix fun
Short.downTo(to: Byte): IntProgression {\n  return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -
1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n *
The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the
returned progression is empty.\n *\npublic infix fun Char.downTo(to: Char): CharProgression {\n  return
CharProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from this value down to the
specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to]
value is greater than `this` value the returned progression is empty.\n *\npublic infix fun Int.downTo(to: Int):
IntProgression {\n  return IntProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n * Returns a progression from
this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to
`this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n *\npublic infix
fun Long.downTo(to: Int): LongProgression {\n  return LongProgression.fromClosedRange(this, to.toLong(), -
1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n *
The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the
returned progression is empty.\n *\npublic infix fun Byte.downTo(to: Int): IntProgression {\n  return
IntProgression.fromClosedRange(this.toInt(), to, -1)\n}\n\n/**\n * Returns a progression from this value down to the
specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to]
value is greater than `this` value the returned progression is empty.\n *\npublic infix fun Short.downTo(to: Int):
IntProgression {\n  return IntProgression.fromClosedRange(this.toInt(), to, -1)\n}\n\n/**\n * Returns a progression
from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less than or equal
to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n *\npublic infix

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fun Int.downTo(to: Long): LongProgression {
    return LongProgression.fromClosedRange(this.toLong(), to, -1L)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Long.downTo(to: Long): LongProgression {
    return LongProgression.fromClosedRange(this, to, -1L)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Byte.downTo(to: Long): LongProgression {
    return LongProgression.fromClosedRange(this.toLong(), to, -1L)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Short.downTo(to: Long): LongProgression {
    return LongProgression.fromClosedRange(this.toLong(), to, -1L)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Int.downTo(to: Short): IntProgression {
    return IntProgression.fromClosedRange(this, to.toInt(), -1)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Long.downTo(to: Short): LongProgression {
    return LongProgression.fromClosedRange(this, to.toLong(), -1L)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Byte.downTo(to: Short): IntProgression {
    return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)
}
// Returns a progression from this value down to the specified [to] value with the step -1.
// The [to] value should be less than or equal to `this` value.
// If the [to] value is greater than `this` value the returned progression is empty.
public infix fun Short.downTo(to: Short): IntProgression {
    return IntProgression.fromClosedRange(this.toInt(), to.toInt(), -1)
}
// Returns a progression that goes over the same range in the opposite direction with the same step.
public fun IntProgression.reversed(): IntProgression {
    return IntProgression.fromClosedRange(last, first, -step)
}
// Returns a progression that goes over the same range in the opposite direction with the same step.
public fun LongProgression.reversed(): LongProgression {
    return LongProgression.fromClosedRange(last, first, -step)
}
// Returns a progression that goes over the same range in the opposite direction with the same step.
public fun CharProgression.reversed(): CharProgression {
    return CharProgression.fromClosedRange(last, first, -step)
}
// Returns a progression that goes over the same range with the given step.
public infix fun IntProgression.step(step: Int): IntProgression {
    checkStepIsPositive(step > 0, step)
    return IntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)
}
// Returns a progression that goes over the same range with the given step.
public infix fun LongProgression.step(step: Long): LongProgression {
    checkStepIsPositive(step > 0, step)
    return LongProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)
}
// Returns a progression that goes over the same range with the given step.
public infix fun CharProgression.step(step: Int): CharProgression {
    checkStepIsPositive(step > 0, step)
    return CharProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)
}
internal fun Int.toByteExactOrNull(): Byte? {
    return if (this in Byte.MIN_VALUE.toInt()..Byte.MAX_VALUE.toInt()) this.toByte() else null
}
internal fun Long.toByteExactOrNull(): Byte? {
    return if (this in Byte.MIN_VALUE.toLong()..Byte.MAX_VALUE.toLong()) this.toByte() else null
}
internal fun Short.toByteExactOrNull(): Byte? {
    return if (this in Byte.MIN_VALUE.toShort()..Byte.MAX_VALUE.toShort()) this.toByte() else null
}
internal fun Double.toByteExactOrNull(): Byte? {
    return if (this in Byte.MIN_VALUE.toDouble()..Byte.MAX_VALUE.toDouble()) this.toInt().toByte() else null
}
internal fun Float.toByteExactOrNull(): Byte? {
    return if (this in

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Byte.MIN_VALUE.toFloat()..Byte.MAX_VALUE.toFloat()) this.toInt().toByte() else null\n}\n\ninternal fun
Long.toIntExactOrNull(): Int? {\n    return if (this in Int.MIN_VALUE.toLong()..Int.MAX_VALUE.toLong())
this.toInt() else null\n}\n\ninternal fun Double.toIntExactOrNull(): Int? {\n    return if (this in
Int.MIN_VALUE.toDouble()..Int.MAX_VALUE.toDouble()) this.toInt() else null\n}\n\ninternal fun
Float.toIntExactOrNull(): Int? {\n    return if (this in Int.MIN_VALUE.toFloat()..Int.MAX_VALUE.toFloat())
this.toInt() else null\n}\n\ninternal fun Double.toLongExactOrNull(): Long? {\n    return if (this in
Long.MIN_VALUE.toDouble()..Long.MAX_VALUE.toDouble()) this.toLong() else null\n}\n\ninternal fun
Float.toLongExactOrNull(): Long? {\n    return if (this in
Long.MIN_VALUE.toFloat()..Long.MAX_VALUE.toFloat()) this.toLong() else null\n}\n\ninternal fun
Int.toShortExactOrNull(): Short? {\n    return if (this in Short.MIN_VALUE.toInt()..Short.MAX_VALUE.toInt())
this.toShort() else null\n}\n\ninternal fun Long.toShortExactOrNull(): Short? {\n    return if (this in
Short.MIN_VALUE.toLong()..Short.MAX_VALUE.toLong()) this.toShort() else null\n}\n\ninternal fun
Double.toShortExactOrNull(): Short? {\n    return if (this in
Short.MIN_VALUE.toDouble()..Short.MAX_VALUE.toDouble()) this.toInt().toShort() else null\n}\n\ninternal fun
Float.toShortExactOrNull(): Short? {\n    return if (this in
Short.MIN_VALUE.toFloat()..Short.MAX_VALUE.toFloat()) this.toInt().toShort() else null\n}\n\n/**\n * Returns
a range from this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to
`this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to: Byte): IntRange {\n    return this ..
(to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n *
\n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun
Long.until(to: Byte): LongRange {\n    return this .. (to.toLong() - 1).toLong()\n}\n\n/**\n * Returns a range from
this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value,
then the returned range is empty.\n */\npublic infix fun Byte.until(to: Byte): IntRange {\n    return this.toInt() ..
(to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n *
\n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun
Short.until(to: Byte): IntRange {\n    return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/**\n * Returns a range from
this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value,
then the returned range is empty.\n */\npublic infix fun Char.until(to: Char): CharRange {\n    if (to <= "\u0000")
return CharRange.EMPTY\n    return this .. (to - 1).toChar()\n}\n\n/**\n * Returns a range from this value up to but
excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned
range is empty.\n */\npublic infix fun Int.until(to: Int): IntRange {\n    if (to <= Int.MIN_VALUE) return
IntRange.EMPTY\n    return this .. (to - 1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding
the specified [to] value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is
empty.\n */\npublic infix fun Long.until(to: Int): LongRange {\n    return this .. (to.toLong() -
1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to:
Int): IntRange {\n    if (to <= Int.MIN_VALUE) return IntRange.EMPTY\n    return this.toInt() .. (to -
1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Short.until(to:
Int): IntRange {\n    if (to <= Int.MIN_VALUE) return IntRange.EMPTY\n    return this.toInt() .. (to -
1).toInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Int.until(to:
Long): LongRange {\n    if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n    return this.toLong() .. (to -
1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Long.until(to:
Long): LongRange {\n    if (to <= Long.MIN_VALUE) return LongRange.EMPTY\n    return this .. (to -
1).toLong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n */\npublic infix fun Byte.until(to:

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Long): LongRange { \n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY \n return this.toLong() .. (to - 1).toLong()\n}\n\n/\*\* \n \* Returns a range from this value up to but excluding the specified [to] value. \n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty. \n \*/ \n\npublic infix fun Short.until(to: Long): LongRange { \n if (to <= Long.MIN\_VALUE) return LongRange.EMPTY \n return this.toLong() .. (to - 1).toLong()\n}\n\n/\*\* \n \* Returns a range from this value up to but excluding the specified [to] value. \n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty. \n \*/ \n\npublic infix fun Int.until(to: Short): IntRange { \n return this .. (to.toInt() - 1).toInt()\n}\n\n/\*\* \n \* Returns a range from this value up to but excluding the specified [to] value. \n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty. \n \*/ \n\npublic infix fun Long.until(to: Short): LongRange { \n return this .. (to.toLong() - 1).toLong()\n}\n\n/\*\* \n \* Returns a range from this value up to but excluding the specified [to] value. \n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty. \n \*/ \n\npublic infix fun Byte.until(to: Short): IntRange { \n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/\*\* \n \* Returns a range from this value up to but excluding the specified [to] value. \n \* \n \* If the [to] value is less than or equal to `this` value, then the returned range is empty. \n \*/ \n\npublic infix fun Short.until(to: Short): IntRange { \n return this.toInt() .. (to.toInt() - 1).toInt()\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeastComparable \n \*/ \n\npublic fun <T : Comparable<T>> T.coerceAtLeast(minimumValue: T): T { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Byte.coerceAtLeast(minimumValue: Byte): Byte { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Short.coerceAtLeast(minimumValue: Short): Short { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Int.coerceAtLeast(minimumValue: Int): Int { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Long.coerceAtLeast(minimumValue: Long): Long { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Float.coerceAtLeast(minimumValue: Float): Float { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not less than the specified [minimumValue]. \n \* \n \* @return this value if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtLeast \n \*/ \n\npublic fun Double.coerceAtLeast(minimumValue: Double): Double { \n return if (this < minimumValue) minimumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not greater than the specified [maximumValue]. \n \* \n \* @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtMostComparable \n \*/ \n\npublic fun <T : Comparable<T>> T.coerceAtMost(maximumValue: T): T { \n return if (this > maximumValue) maximumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not greater than the specified [maximumValue]. \n \* \n \* @return this value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise. \n \* \n \* @sample samples.comparisons.ComparableOps.coerceAtMost \n \*/ \n\npublic fun Byte.coerceAtMost(maximumValue: Byte): Byte { \n return if (this > maximumValue) maximumValue else this\n}\n\n/\*\* \n \* Ensures that this value is not



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return minimumValue\n  if (this > maximumValue) return maximumValue\n  return this\n}\n\n/**\n * Ensures
that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in
the range, or [minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater
than [maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceIn\n *\npublic fun
Long.coerceIn(minimumValue: Long, maximumValue: Long): Long {\n  if (minimumValue > maximumValue)
throw IllegalArgumentException("\Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n  if (this < minimumValue) return minimumValue\n  if (this > maximumValue)
return maximumValue\n  return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n *\npublic fun Float.coerceIn(minimumValue: Float,
maximumValue: Float): Float {\n  if (minimumValue > maximumValue) throw
IllegalArgumentException("\Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n  if (this < minimumValue) return minimumValue\n  if (this > maximumValue)
return maximumValue\n  return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n *\npublic fun Double.coerceIn(minimumValue: Double,
maximumValue: Double): Double {\n  if (minimumValue > maximumValue) throw
IllegalArgumentException("\Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n  if (this < minimumValue) return minimumValue\n  if (this > maximumValue)
return maximumValue\n  return this\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive`
if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInFloatingPointRange\n *\n@SinceKotlin("1.1")\npublic fun <T :
Comparable<T>> T.coerceIn(range: ClosedFloatingPointRange<T>): T {\n  if (range.isEmpty()) throw
IllegalArgumentException("\Cannot coerce value to an empty range: $range.")\n  return when {\n    // this <
start equiv to this <= start && !(this >= start)\n    range.lessThanOrEqualTo(this, range.start) &&
!range.lessThanOrEqualTo(range.start, this) -> range.start\n    // this > end equiv to this >= end && !(this <= end)\n
range.lessThanOrEqualTo(range.endInclusive, this) && !range.lessThanOrEqualTo(this, range.endInclusive) ->
range.endInclusive\n    else -> this\n  }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive`
if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInComparable\n *\npublic fun <T : Comparable<T>>
T.coerceIn(range: ClosedRange<T>): T {\n  if (range is ClosedFloatingPointRange) {\n    return
this.coerceIn<T>(range)\n  }\n  if (range.isEmpty()) throw IllegalArgumentException("\Cannot coerce value to an
empty range: $range.")\n  return when {\n    this < range.start -> range.start\n    this > range.endInclusive ->
range.endInclusive\n    else -> this\n  }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n *
@return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or `range.endInclusive`
if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n *\npublic fun Int.coerceIn(range: ClosedRange<Int>): Int {\n  if (range is ClosedFloatingPointRange) {\n
return this.coerceIn<Int>(range)\n  }\n  if (range.isEmpty()) throw IllegalArgumentException("\Cannot coerce
value to an empty range: $range.")\n  return when {\n    this < range.start -> range.start\n    this >
range.endInclusive -> range.endInclusive\n    else -> this\n  }\n}\n\n/**\n * Ensures that this value lies in the
specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than
`range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceIn\n *\npublic fun Long.coerceIn(range: ClosedRange<Long>): Long
{\n  if (range is ClosedFloatingPointRange) {\n    return this.coerceIn<Long>(range)\n  }\n  if

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fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value, truncating the
result to an integer that is closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other:
ULong): ULong = this.toULong().div(other)\n\n /**\n * Calculates the remainder of truncating division of this
value by the other value.\n * \n * The result is always less than the divisor.\n */\n
@kotlin.internal.InlineOnly\n public inline operator fun rem(other: UByte): UInt =
this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the
other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: UShort): UInt = this.toUInt().rem(other.toUInt())\n /**\n * Calculates the
remainder of truncating division of this value by the other value.\n * \n * The result is always less than the
divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UInt): UInt =
this.toUInt().rem(other)\n /**\n * Calculates the remainder of truncating division of this value by the other
value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n /**\n * Divides this value by
the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types,
the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UByte): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this
value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned
types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UShort): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this
value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned
types, the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UInt): UInt = this.toUInt().floorDiv(other)\n /**\n * Divides this value by the
other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the
results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public
inline fun floorDiv(other: ULong): ULong = this.toULong().floorDiv(other)\n\n /**\n * Calculates the
remainder of flooring division of this value by the other value.\n * \n * The result is always less than the
divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the same.\n
*/\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UByte): UByte =
this.toUInt().mod(other.toUInt()).toUByte()\n /**\n * Calculates the remainder of flooring division of this value
by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the
remainders of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun mod(other: UShort): UShort = this.toUInt().mod(other.toUInt()).toUShort()\n /**\n *
Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is always less
than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the
same.\n */\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UInt): UInt =
this.toUInt().mod(other)\n /**\n * Calculates the remainder of flooring division of this value by the other
value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders of
flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun
mod(other: ULong): ULong = this.toULong().mod(other)\n\n /**\n * Returns this value incremented by one.\n
*\n * @sample samples.misc.Builtins.inc\n */\n @kotlin.internal.InlineOnly\n public inline operator fun
inc(): UByte = UByte(data.inc())\n\n /**\n * Returns this value decremented by one.\n * \n * @sample
samples.misc.Builtins.dec\n */\n @kotlin.internal.InlineOnly\n public inline operator fun dec(): UByte =
UByte(data.dec())\n\n /**\n * Creates a range from this value to the specified [other] value. */\n
@kotlin.internal.InlineOnly\n public inline operator fun rangeTo(other: UByte): UIntRange =

```

```

UIntRange(this.toUInt(), other.toUInt())\n\n /** Performs a bitwise AND operation between the two values. *\n
@kotlin.internal.InlineOnly\n public inline infix fun and(other: UByte): UByte = UByte(this.data and other.data)\n
/** Performs a bitwise OR operation between the two values. *\n @kotlin.internal.InlineOnly\n public inline
infix fun or(other: UByte): UByte = UByte(this.data or other.data)\n /** Performs a bitwise XOR operation
between the two values. *\n @kotlin.internal.InlineOnly\n public inline infix fun xor(other: UByte): UByte =
UByte(this.data xor other.data)\n /** Inverts the bits in this value. *\n @kotlin.internal.InlineOnly\n public
inline fun inv(): UByte = UByte(data.inv())\n\n /**\n * Converts this [UByte] value to [Byte].\n * \n * If
this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n * the same
numerical value as this `UByte`. Otherwise the result is negative.\n * \n * The resulting `Byte` value has the
same binary representation as this `UByte` value.\n * \n @kotlin.internal.InlineOnly\n public inline fun
toByte(): Byte = data\n /**\n * Converts this [UByte] value to [Short].\n * \n * The resulting `Short` value
represents the same numerical value as this `UByte`. \n * \n * The least significant 8 bits of the resulting `Short`
value are the same as the bits of this `UByte` value, \n * whereas the most significant 8 bits are filled with zeros.\n
*\n @kotlin.internal.InlineOnly\n public inline fun toShort(): Short = data.toShort() and 0xFF\n /**\n *
Converts this [UByte] value to [Int].\n * \n * The resulting `Int` value represents the same numerical value as
this `UByte`. \n * \n * The least significant 8 bits of the resulting `Int` value are the same as the bits of this
`UByte` value, \n * whereas the most significant 24 bits are filled with zeros.\n * \n
@kotlin.internal.InlineOnly\n public inline fun toInt(): Int = data.toInt() and 0xFF\n /**\n * Converts this
[UByte] value to [Long].\n * \n * The resulting `Long` value represents the same numerical value as this
`UByte`. \n * \n * The least significant 8 bits of the resulting `Long` value are the same as the bits of this
`UByte` value, \n * whereas the most significant 56 bits are filled with zeros.\n * \n
@kotlin.internal.InlineOnly\n public inline fun toLong(): Long = data.toLong() and 0xFF\n\n /** Returns this
value. *\n @kotlin.internal.InlineOnly\n public inline fun toUByte(): UByte = this\n /**\n * Converts this
[UByte] value to [UShort].\n * \n * The resulting `UShort` value represents the same numerical value as this
`UByte`. \n * \n * The least significant 8 bits of the resulting `UShort` value are the same as the bits of this
`UByte` value, \n * whereas the most significant 8 bits are filled with zeros.\n * \n
@kotlin.internal.InlineOnly\n public inline fun toUShort(): UShort = UShort(data.toShort() and 0xFF)\n /**\n
* Converts this [UByte] value to [UInt].\n * \n * The resulting `UInt` value represents the same numerical value
as this `UByte`. \n * \n * The least significant 8 bits of the resulting `UInt` value are the same as the bits of this
`UByte` value, \n * whereas the most significant 24 bits are filled with zeros.\n * \n
@kotlin.internal.InlineOnly\n public inline fun toUInt(): UInt = UInt(data.toInt() and 0xFF)\n /**\n *
Converts this [UByte] value to [ULong].\n * \n * The resulting `ULong` value represents the same numerical
value as this `UByte`. \n * \n * The least significant 8 bits of the resulting `ULong` value are the same as the bits
of this `UByte` value, \n * whereas the most significant 56 bits are filled with zeros.\n * \n
@kotlin.internal.InlineOnly\n public inline fun toULong(): ULong = ULong(data.toLong() and 0xFF)\n\n /**\n
* Converts this [UByte] value to [Float].\n * \n * The resulting `Float` value represents the same numerical
value as this `UByte`. \n * \n @kotlin.internal.InlineOnly\n public inline fun toFloat(): Float =
this.toInt().toFloat()\n /**\n * Converts this [UByte] value to [Double].\n * \n * The resulting `Double`
value represents the same numerical value as this `UByte`. \n * \n @kotlin.internal.InlineOnly\n public inline
fun toDouble(): Double = this.toInt().toDouble()\n\n public override fun toString(): String =
toInt().toString()\n\n}\n\n/**\n * Converts this [Byte] value to [UByte].\n * \n * If this value is positive, the resulting
`UByte` value represents the same numerical value as this `Byte`. \n * \n * The resulting `UByte` value has the same
binary representation as this `Byte` value.\n
*\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Byte.toUByte(): UByte = UByte(this)\n /**\n * Converts this [Short] value to [UByte].\n * \n * If
this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n *
the same numerical value as this `Short`. \n * \n * The resulting `UByte` value is represented by the least significant 8
bits of this `Short` value.\n

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*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.toUByte(): UByte = UByte(this.toByte())\n/**\n * Converts this [Int] value to [UByte].\n *\n * If this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value\n represents\n * the same numerical value as this `Int`. \n *\n * The resulting `UByte` value is represented by the least\n significant 8 bits of this `Int` value.\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Int.toUByte(): UByte = UByte(this.toByte())\n/**\n * Converts this [Long] value to [UByte].\n *\n * If this value is positive and less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value\n represents\n * the same numerical value as this `Long`. \n *\n * The resulting `UByte` value is represented by the\n least significant 8 bits of this `Long` value.\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun Long.toUByte(): UByte = UByte(this.toByte())\n"/*\n * Copyright 2010-2021 JetBrains s.r.o.\n and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license\n that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage\n kotlin\n\nimport kotlin.experimental.*\nimport\n kotlin.jvm.*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@JvmInline\npublic value class UInt @PublishedApi internal constructor(@PublishedApi internal val data: Int) :\n Comparable<UInt> {\n\n    companion object {\n\n        /**\n         * A constant holding the minimum value an\n         instance of UInt can have.\n         */\n        public const val MIN_VALUE: UInt = UInt(0)\n\n        /**\n         * A\n         constant holding the maximum value an instance of UInt can have.\n         */\n        public const val MAX_VALUE:\n UInt = UInt(-1)\n\n        /**\n         * The number of bytes used to represent an instance of UInt in a binary form.\n         */\n        public const val SIZE_BYTES: Int = 4\n\n        /**\n         * The number of bits used to represent an\n         instance of UInt in a binary form.\n         */\n        public const val SIZE_BITS: Int = 32\n    }\n\n    /**\n     * Compares this value with the specified value for order.\n     * Returns zero if this value is equal to the specified other\n     value, a negative number if it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UByte): Int =\n this.compareTo(other.toUInt())\n\n    /**\n     * Compares this value with the specified value for order.\n     *\n     Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a\n     positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n compareTo(other: UShort): Int = this.compareTo(other.toUInt())\n\n    /**\n     * Compares this value with the\n     specified value for order.\n     * Returns zero if this value is equal to the specified other value, a negative number if\n     it's less than other,\n     * or a positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    @Suppress("OVERRIDE_BY_INLINE")\n    public override inline operator fun compareTo(other: UInt): Int =\n uintCompare(this.data, other.data)\n\n    /**\n     * Compares this value with the specified value for order.\n     *\n     Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n     * or a\n     positive number if it's greater than other.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n compareTo(other: ULong): Int = this.toULong().compareTo(other)\n\n    /**\n     * Adds the other value to this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UByte): UInt = this.plus(other.toUInt())\n\n    /**\n     * Adds the other value to this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other:\n UShort): UInt = this.plus(other.toUInt())\n\n    /**\n     * Adds the other value to this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UInt): UInt = UInt(this.data.plus(other.data))\n\n    /**\n     * Adds the other value to this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other:\n ULong): ULong = this.toULong().plus(other)\n\n    /**\n     * Subtracts the other value from this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UByte): UInt = this.minus(other.toUInt())\n\n    /**\n     * Subtracts the other value from this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun\n minus(other: UShort): UInt = this.minus(other.toUInt())\n\n    /**\n     * Subtracts the other value from this value.\n     */\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UInt): UInt =\n UInt(this.data.minus(other.data))\n\n    /**\n     * Subtracts the other value from this value.\n     */

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@kotlin.internal.InlineOnly\n public inline operator fun minus(other: ULong): ULong =
this.toULong().minus(other)\n\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n
public inline operator fun times(other: UByte): UInt = this.times(other.toUInt())\n /** Multiplies this value by the
other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: UShort): UInt =
this.times(other.toUInt())\n /** Multiplies this value by the other value. */\n @kotlin.internal.InlineOnly\n
public inline operator fun times(other: UInt): UInt = UInt(this.data.times(other.data))\n /** Multiplies this value
by the other value. */\n @kotlin.internal.InlineOnly\n public inline operator fun times(other: ULong): ULong =
this.toULong().times(other)\n\n /** Divides this value by the other value, truncating the result to an integer that is
closer to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UByte): UInt =
this.div(other.toUInt())\n /** Divides this value by the other value, truncating the result to an integer that is closer
to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UShort): UInt =
this.div(other.toUInt())\n /** Divides this value by the other value, truncating the result to an integer that is closer
to zero. */\n @kotlin.internal.InlineOnly\n public inline operator fun div(other: UInt): UInt = uintDivide(this,
other)\n /** Divides this value by the other value, truncating the result to an integer that is closer to zero. */\n
@kotlin.internal.InlineOnly\n public inline operator fun div(other: ULong): ULong =
this.toULong().div(other)\n\n /**\n * Calculates the remainder of truncating division of this value by the other
value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: UByte): UInt = this.rem(other.toUInt())\n /**\n * Calculates the remainder of
truncating division of this value by the other value.\n * \n * The result is always less than the divisor.\n */\n
@kotlin.internal.InlineOnly\n public inline operator fun rem(other: UShort): UInt = this.rem(other.toUInt())\n
/**\n * Calculates the remainder of truncating division of this value by the other value.\n * \n * The result is
always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UInt):
UInt = uintRemainder(this, other)\n /**\n * Calculates the remainder of truncating division of this value by the
other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n\n /**\n * Divides this value by
the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types,
the results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UByte): UInt = this.floorDiv(other.toUInt())\n /**\n * Divides this value by the
other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the
results of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public
inline fun floorDiv(other: UShort): UInt = this.floorDiv(other.toUInt())\n /**\n * Divides this value by the other
value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the results
of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline
fun floorDiv(other: UInt): UInt = div(other)\n /**\n * Divides this value by the other value, flooring the result to
an integer that is closer to negative infinity.\n * \n * For unsigned types, the results of flooring division and
truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun floorDiv(other:
ULong): ULong = this.toULong().floorDiv(other)\n\n /**\n * Calculates the remainder of flooring division of
this value by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned
types, the remainders of flooring division and truncating division are the same.\n */\n
@kotlin.internal.InlineOnly\n public inline fun mod(other: UByte): UByte = this.mod(other.toUInt()).toUByte()\n
/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is
always less than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating
division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UShort): UShort =
this.mod(other.toUInt()).toUShort()\n /**\n * Calculates the remainder of flooring division of this value by the
other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders
of flooring division and truncating division are the same.\n */\n @kotlin.internal.InlineOnly\n public inline
fun mod(other: UInt): UInt = rem(other)\n /**\n * Calculates the remainder of flooring division of this value by
the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the

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remainders of flooring division and truncating division are the same.\n
 */\n @kotlin.internal.InlineOnly\n
public inline fun mod(other: ULong): ULong = this.toULong().mod(other)\n
 /**\n  * Returns this value
incremented by one.\n
 */\n * @sample samples.misc.Builtins.inc\n
 */\n @kotlin.internal.InlineOnly\n
public inline operator fun inc(): UInt = UInt(data.inc())\n
 /**\n  * Returns this value decremented by one.\n
 */\n * @sample samples.misc.Builtins.dec\n
 */\n @kotlin.internal.InlineOnly\n
public inline operator fun
dec(): UInt = UInt(data.dec())\n
 /** Creates a range from this value to the specified [other] value. */\n
@kotlin.internal.InlineOnly\n
public inline operator fun rangeTo(other: UInt): UIntRange = UIntRange(this,
other)\n
 /**\n  * Shifts this value left by the [bitCount] number of bits.\n
 */\n  * Note that only the five
lowest-order bits of the [bitCount] are used as the shift distance.\n
 * The shift distance actually used is therefore
always in the range `0..31`.\n
 */\n @kotlin.internal.InlineOnly\n
public inline infix fun shl(bitCount: Int): UInt
= UInt(data shl bitCount)\n
 /**\n  * Shifts this value right by the [bitCount] number of bits, filling the leftmost
bits with zeros.\n
 */\n  * Note that only the five lowest-order bits of the [bitCount] are used as the shift
distance.\n
 * The shift distance actually used is therefore always in the range `0..31`.\n
 */\n
@kotlin.internal.InlineOnly\n
public inline infix fun shr(bitCount: Int): UInt = UInt(data ushr bitCount)\n
 /**
Performs a bitwise AND operation between the two values. */\n
@kotlin.internal.InlineOnly\n
public inline infix
fun and(other: UInt): UInt = UInt(this.data and other.data)\n
 /** Performs a bitwise OR operation between the two
values. */\n
@kotlin.internal.InlineOnly\n
public inline infix fun or(other: UInt): UInt = UInt(this.data or
other.data)\n
 /** Performs a bitwise XOR operation between the two values. */\n
@kotlin.internal.InlineOnly\n
public inline infix fun xor(other: UInt): UInt = UInt(this.data xor other.data)\n
 /** Inverts the bits in this value.
 */\n
@kotlin.internal.InlineOnly\n
public inline fun inv(): UInt = UInt(data.inv())\n
 /**\n  * Converts this
[UInt] value to [Byte].\n
 */\n  * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte`
value represents\n
 * the same numerical value as this `UInt`.\n
 */\n  * The resulting `Byte` value is
represented by the least significant 8 bits of this `UInt` value.\n
 * Note that the resulting `Byte` value may be
negative.\n
 */\n @kotlin.internal.InlineOnly\n
public inline fun toByte(): Byte = data.toByte()\n
 /**\n  *
Converts this [UInt] value to [Short].\n
 */\n  * If this value is less than or equals to [Short.MAX_VALUE], the
resulting `Short` value represents\n
 * the same numerical value as this `UInt`.\n
 */\n  * The resulting `Short`
value is represented by the least significant 16 bits of this `UInt` value.\n
 * Note that the resulting `Short` value
may be negative.\n
 */\n @kotlin.internal.InlineOnly\n
public inline fun toShort(): Short = data.toShort()\n
 /**\n  *
Converts this [UInt] value to [Int].\n
 */\n  * If this value is less than or equals to [Int.MAX_VALUE],
the resulting `Int` value represents\n
 * the same numerical value as this `UInt`. Otherwise the result is negative.\n
 */\n  * The resulting `Int` value has the same binary representation as this `UInt` value.\n
 */\n
@kotlin.internal.InlineOnly\n
public inline fun toInt(): Int = data\n
 /**\n  * Converts this [UInt] value to
[Long].\n
 */\n  * The resulting `Long` value represents the same numerical value as this `UInt`.\n
 */\n  * The
least significant 32 bits of the resulting `Long` value are the same as the bits of this `UInt` value,\n
 * whereas the
most significant 32 bits are filled with zeros.\n
 */\n @kotlin.internal.InlineOnly\n
public inline fun toLong():
Long = data.toLong() and 0xFFFF_FFFF\n
 /**\n  * Converts this [UInt] value to [UByte].\n
 */\n  * If this
value is less than or equals to [UByte.MAX_VALUE], the resulting `UByte` value represents\n
 * the same
numerical value as this `UInt`.\n
 */\n  * The resulting `UByte` value is represented by the least significant 8 bits
of this `UInt` value.\n
 */\n @kotlin.internal.InlineOnly\n
public inline fun toUByte(): UByte =
data.toUByte()\n
 /**\n  * Converts this [UInt] value to [UShort].\n
 */\n  * If this value is less than or equals
to [UShort.MAX_VALUE], the resulting `UShort` value represents\n
 * the same numerical value as this `UInt`.\n
 */\n  * The resulting `UShort` value is represented by the least significant 16 bits of this `UInt` value.\n
 */\n
@kotlin.internal.InlineOnly\n
public inline fun toUShort(): UShort = data.toUShort()\n
 /** Returns this value.
 */\n
@kotlin.internal.InlineOnly\n
public inline fun toUInt(): UInt = this\n
 /**\n  * Converts this [UInt] value
to [ULong].\n
 */\n  * The resulting `ULong` value represents the same numerical value as this `UInt`.\n
 */\n  *
The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `UInt` value,\n
 *
whereas the most significant 32 bits are filled with zeros.\n
 */\n @kotlin.internal.InlineOnly\n
public inline
fun toULong(): ULong = ULong(data.toLong() and 0xFFFF_FFFF)\n
 /**\n  * Converts this [UInt] value to

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Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a
positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n
@Suppress("OVERRIDE_BY_INLINE")\n public override inline operator fun compareTo(other: UShort): Int =
this.toInt().compareTo(other.toInt())\n /**\n * Compares this value with the specified value for order.\n *
Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n * or a
positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun
compareTo(other: UInt): Int = this.toUInt().compareTo(other)\n /**\n * Compares this value with the
specified value for order.\n * Returns zero if this value is equal to the specified other value, a negative number if
it's less than other,\n * or a positive number if it's greater than other.\n */\n @kotlin.internal.InlineOnly\n
public inline operator fun compareTo(other: ULong): Int = this.toULong().compareTo(other)\n /** Adds the
other value to this value. *\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UByte): UInt =
this.toUInt().plus(other.toUInt())\n /** Adds the other value to this value. *\n @kotlin.internal.InlineOnly\n
public inline operator fun plus(other: UShort): UInt = this.toUInt().plus(other.toUInt())\n /** Adds the other value
to this value. *\n @kotlin.internal.InlineOnly\n public inline operator fun plus(other: UInt): UInt =
this.toUInt().plus(other)\n /** Adds the other value to this value. *\n @kotlin.internal.InlineOnly\n public
inline operator fun plus(other: ULong): ULong = this.toULong().plus(other)\n /** Subtracts the other value from
this value. *\n @kotlin.internal.InlineOnly\n public inline operator fun minus(other: UByte): UInt =
this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun minus(other: UShort): UInt =
this.toUInt().minus(other.toUInt())\n /** Subtracts the other value from this value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun minus(other: UInt): UInt = this.toUInt().minus(other)\n
/** Subtracts the other value from this value. *\n @kotlin.internal.InlineOnly\n public inline operator fun
minus(other: ULong): ULong = this.toULong().minus(other)\n /** Multiplies this value by the other value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun times(other: UByte): UInt =
this.toUInt().times(other.toUInt())\n /** Multiplies this value by the other value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun times(other: UShort): UInt =
this.toUInt().times(other.toUInt())\n /** Multiplies this value by the other value. *\n
@kotlin.internal.InlineOnly\n public inline operator fun times(other: UInt): UInt = this.toUInt().times(other)\n
/** Multiplies this value by the other value. *\n @kotlin.internal.InlineOnly\n public inline operator fun
times(other: ULong): ULong = this.toULong().times(other)\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. *\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UByte): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. *\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UShort): UInt = this.toUInt().div(other.toUInt())\n /** Divides this value by the other value,
truncating the result to an integer that is closer to zero. *\n @kotlin.internal.InlineOnly\n public inline operator
fun div(other: UInt): UInt = this.toUInt().div(other)\n /** Divides this value by the other value, truncating the
result to an integer that is closer to zero. *\n @kotlin.internal.InlineOnly\n public inline operator fun div(other:
ULong): ULong = this.toULong().div(other)\n /**\n * Calculates the remainder of truncating division of this
value by the other value.\n * \n * The result is always less than the divisor.\n */\n
@kotlin.internal.InlineOnly\n public inline operator fun rem(other: UByte): UInt =
this.toUInt().rem(other.toUInt())\n /**\n * Calculates the remainder of truncating division of this value by the
other value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: UShort): UInt = this.toUInt().rem(other.toUInt())\n /**\n * Calculates the
remainder of truncating division of this value by the other value.\n * \n * The result is always less than the
divisor.\n */\n @kotlin.internal.InlineOnly\n public inline operator fun rem(other: UInt): UInt =
this.toUInt().rem(other)\n /**\n * Calculates the remainder of truncating division of this value by the other
value.\n * \n * The result is always less than the divisor.\n */\n @kotlin.internal.InlineOnly\n public
inline operator fun rem(other: ULong): ULong = this.toULong().rem(other)\n /**\n * Divides this value by

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the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types,
the results of flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UByte): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this
value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned
types, the results of flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UShort): UInt = this.toUInt().floorDiv(other.toUInt())\n /**\n * Divides this
value by the other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned
types, the results of flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n
public inline fun floorDiv(other: UInt): UInt = this.toUInt().floorDiv(other)\n /**\n * Divides this value by the
other value, flooring the result to an integer that is closer to negative infinity.\n * \n * For unsigned types, the
results of flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n public
inline fun floorDiv(other: ULong): ULong = this.toULong().floorDiv(other)\n\n /**\n * Calculates the
remainder of flooring division of this value by the other value.\n * \n * The result is always less than the
divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the same.\n
*\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UByte): UByte =
this.toUInt().mod(other.toUInt()).toUByte()\n /**\n * Calculates the remainder of flooring division of this value
by the other value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the
remainders of flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n
public inline fun mod(other: UShort): UShort = this.toUInt().mod(other.toUInt()).toUShort()\n /**\n *
Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is always less
than the divisor.\n * \n * For unsigned types, the remainders of flooring division and truncating division are the
same.\n *\n @kotlin.internal.InlineOnly\n public inline fun mod(other: UInt): UInt =
this.toUInt().mod(other)\n /**\n * Calculates the remainder of flooring division of this value by the other
value.\n * \n * The result is always less than the divisor.\n * \n * For unsigned types, the remainders of
flooring division and truncating division are the same.\n *\n @kotlin.internal.InlineOnly\n public inline fun
mod(other: ULong): ULong = this.toULong().mod(other)\n\n /**\n * Returns this value incremented by one.\n
*\n * @sample samples.misc.Builtins.inc\n *\n @kotlin.internal.InlineOnly\n public inline operator fun
inc(): UShort = UShort(data.inc())\n\n /**\n * Returns this value decremented by one.\n *\n * @sample
samples.misc.Builtins.dec\n *\n @kotlin.internal.InlineOnly\n public inline operator fun dec(): UShort =
UShort(data.dec())\n\n /** Creates a range from this value to the specified [other] value. *\n
@\n @kotlin.internal.InlineOnly\n public inline operator fun rangeTo(other: UShort): UIntRange =
UIntRange(this.toUInt(), other.toUInt())\n\n /** Performs a bitwise AND operation between the two values. *\n
@\n @kotlin.internal.InlineOnly\n public inline infix fun and(other: UShort): UShort = UShort(this.data and
other.data)\n\n /** Performs a bitwise OR operation between the two values. *\n @kotlin.internal.InlineOnly\n
public inline infix fun or(other: UShort): UShort = UShort(this.data or other.data)\n\n /** Performs a bitwise XOR
operation between the two values. *\n @kotlin.internal.InlineOnly\n public inline infix fun xor(other: UShort):
UShort = UShort(this.data xor other.data)\n\n /** Inverts the bits in this value. *\n @kotlin.internal.InlineOnly\n
public inline fun inv(): UShort = UShort(data.inv())\n\n /**\n * Converts this [UShort] value to [Byte].\n *\n
* If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents\n * the same
numerical value as this `UShort`.\n *\n * The resulting `Byte` value is represented by the least significant 8 bits
of this `UShort` value.\n * Note that the resulting `Byte` value may be negative.\n *\n
@\n @kotlin.internal.InlineOnly\n public inline fun toByte(): Byte = data.toByte()\n\n /**\n * Converts this [UShort]
value to [Short].\n *\n * If this value is less than or equals to [Short.MAX_VALUE], the resulting `Short` value
represents\n * the same numerical value as this `UShort`. Otherwise the result is negative.\n *\n * The
resulting `Short` value has the same binary representation as this `UShort` value.\n *\n
@\n @kotlin.internal.InlineOnly\n public inline fun toShort(): Short = data\n\n /**\n * Converts this [UShort] value
to [Int].\n *\n * The resulting `Int` value represents the same numerical value as this `UShort`.\n *\n * The
least significant 16 bits of the resulting `Int` value are the same as the bits of this `UShort` value.\n * whereas the

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most significant 16 bits are filled with zeros.\n
 *^\n @kotlin.internal.InlineOnly\n public inline fun toInt(): Int
= data.toInt() and 0xFFFF\n /**\n * Converts this [UShort] value to [Long].\n *\n * The resulting `Long`
value represents the same numerical value as this `UShort`.\n *\n * The least significant 16 bits of the resulting
`Long` value are the same as the bits of this `UShort` value,\n * whereas the most significant 48 bits are filled
with zeros.\n
 *^\n @kotlin.internal.InlineOnly\n public inline fun toLong(): Long = data.toLong() and
0xFFFF\n\n /**\n * Converts this [UShort] value to [UByte].\n *\n * If this value is less than or equals to
[UByte.MAX_VALUE], the resulting `UByte` value represents\n * the same numerical value as this `UShort`.\n
*\n * The resulting `UByte` value is represented by the least significant 8 bits of this `UShort` value.\n
 *^\n
@kotlin.internal.InlineOnly\n public inline fun toUByte(): UByte = data.toUByte()\n /** Returns this value. *\n
@kotlin.internal.InlineOnly\n public inline fun toUShort(): UShort = this\n /**\n * Converts this [UShort]
value to [UInt].\n *\n * The resulting `UInt` value represents the same numerical value as this `UShort`.\n
*\n * The least significant 16 bits of the resulting `UInt` value are the same as the bits of this `UShort` value,\n
* whereas the most significant 16 bits are filled with zeros.\n
 *^\n @kotlin.internal.InlineOnly\n public inline
fun toUInt(): UInt = UInt(data.toInt() and 0xFFFF)\n /**\n * Converts this [UShort] value to [ULong].\n *\n
* The resulting `ULong` value represents the same numerical value as this `UShort`.\n *\n * The least
significant 16 bits of the resulting `ULong` value are the same as the bits of this `UShort` value,\n * whereas the
most significant 48 bits are filled with zeros.\n
 *^\n @kotlin.internal.InlineOnly\n public inline fun toULong():
ULong = ULong(data.toLong() and 0xFFFF)\n\n /**\n * Converts this [UShort] value to [Float].\n *\n *
The resulting `Float` value represents the same numerical value as this `UShort`.\n
 *^\n
@kotlin.internal.InlineOnly\n public inline fun toFloat(): Float = this.toInt().toFloat()\n /**\n * Converts this
[UShort] value to [Double].\n *\n * The resulting `Double` value represents the same numerical value as this
`UShort`.\n
 *^\n @kotlin.internal.InlineOnly\n public inline fun toDouble(): Double =
this.toInt().toDouble()\n\n public override fun toString(): String = toInt().toString()\n\n\n /**\n * Converts this
[Byte] value to [UShort].\n *\n * If this value is positive, the resulting `UShort` value represents the same numerical
value as this `Byte`.\n *\n * The least significant 8 bits of the resulting `UShort` value are the same as the bits of this
`Byte` value,\n * whereas the most significant 8 bits are filled with the sign bit of this value.\n
 *^\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Byte.toUShort(): UShort = UShort(this.toShort())\n\n /**\n * Converts this [Short] value to
[UShort].\n *\n * If this value is positive, the resulting `UShort` value represents the same numerical value as this
`Short`.\n *\n * The resulting `UShort` value has the same binary representation as this `Short` value.\n
 *^\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Short.toUShort(): UShort = UShort(this)\n\n /**\n * Converts this [Int] value to [UShort].\n *\n
* If this value is positive and less than or equals to [UShort.MAX_VALUE], the resulting `UShort` value represents\n
* the same numerical value as this `Int`.\n *\n * The resulting `UShort` value is represented by the least significant 16
bits of this `Int` value.\n
 *^\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Int.toUShort(): UShort = UShort(this.toShort())\n\n /**\n * Converts this [Long] value to
[UShort].\n *\n * If this value is positive and less than or equals to [UShort.MAX_VALUE], the resulting `UShort`
value represents\n * the same numerical value as this `Long`.\n *\n * The resulting `UShort` value is represented by
the least significant 16 bits of this `Long` value.\n
 *^\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Long.toUShort(): UShort = UShort(this.toShort())\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin.ranges\n\n/**\n * A range of values of type `Char`.\n
 */\npublic class CharRange(start: Char, endInclusive:
Char) : CharProgression(start, endInclusive, 1), ClosedRange<Char> {\n
    override val start: Char get() = first\n
    override val endInclusive: Char get() = last\n
    override fun contains(value: Char): Boolean = first <= value &&
value <= last\n
    /**\n * Checks whether the range is empty.\n
 */\n * The range is empty if its start value is

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greater than the end value.\n    *\n    override fun isEmpty(): Boolean = first > last\n\n    override fun equals(other: Any?): Boolean =\n        other is CharRange && (isEmpty() && other.isEmpty()) ||\n        first == other.first && last == other.last\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * first.code + last.code)\n\n    override fun toString(): String = \"$first..$last\"\n\n    companion object {\n        /** An empty range of values of type Char. *\n        public val EMPTY: CharRange = CharRange(1.toChar(), 0.toChar())\n    }\n\n    /** A range of values of type `Int`. *\n    public class IntRange(start: Int, endInclusive: Int) : IntProgression(start, endInclusive, 1), ClosedRange<Int> {\n        override val start: Int get() = first\n        override val endInclusive: Int get() = last\n\n        override fun contains(value: Int): Boolean = first <= value && value <= last\n\n        /** \n        * Checks whether the range is empty.\n        *\n        * The range is empty if its start value is greater than the end value.\n        *\n        override fun isEmpty(): Boolean = first > last\n\n        override fun equals(other: Any?): Boolean =\n            other is IntRange && (isEmpty() && other.isEmpty()) ||\n            first == other.first && last == other.last\n\n        override fun hashCode(): Int =\n            if (isEmpty()) -1 else (31 * first + last)\n\n        override fun toString(): String = \"$first..$last\"\n\n        companion object {\n            /** An empty range of values of type Int. *\n            public val EMPTY: IntRange = IntRange(1, 0)\n        }\n\n        /** A range of values of type `Long`. *\n        public class LongRange(start: Long, endInclusive: Long) : LongProgression(start, endInclusive, 1), ClosedRange<Long> {\n            override val start: Long get() = first\n            override val endInclusive: Long get() = last\n\n            override fun contains(value: Long): Boolean = first <= value && value <= last\n\n            /** \n            * Checks whether the range is empty.\n            *\n            * The range is empty if its start value is greater than the end value.\n            *\n            override fun isEmpty(): Boolean = first > last\n\n            override fun equals(other: Any?): Boolean =\n                other is LongRange && (isEmpty() && other.isEmpty()) ||\n                first == other.first && last == other.last\n\n            override fun hashCode(): Int =\n                if (isEmpty()) -1 else (31 * (first xor (first ushr 32)) + (last xor (last ushr 32))).toInt()\n\n            override fun toString(): String = \"$first..$last\"\n\n            companion object {\n                /** An empty range of values of type Long. *\n                public val EMPTY: LongRange = LongRange(1, 0)\n            }\n\n            /** Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n            * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n            *\n            @file:kotlin.jvm.JvmMultifileClass\n            @file:kotlin.jvm.JvmName("CollectionsKt")\n            @file:OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n            package kotlin.collections\n            import kotlin.contracts.*\n            import kotlin.random.Random\n            internal object EmptyIterator : ListIterator<Nothing> {\n                override fun hasNext(): Boolean = false\n                override fun hasPrevious(): Boolean = false\n                override fun nextIndex(): Int = 0\n                override fun previousIndex(): Int = -1\n                override fun next(): Nothing = throw NoSuchElementException()\n                override fun previous(): Nothing = throw NoSuchElementException()\n            }\n            internal object EmptyList : List<Nothing>, Serializable, RandomAccess {\n                private const val serialVersionUID: Long = -7390468764508069838L\n\n                override fun equals(other: Any?): Boolean = other is List<*> && other.isEmpty()\n                override fun hashCode(): Int = 1\n                override fun toString(): String = "[]"\n                override val size: Int get() = 0\n                override fun isEmpty(): Boolean = true\n                override fun contains(element: Nothing): Boolean = false\n                override fun containsAll(elements: Collection<Nothing>): Boolean = elements.isEmpty()\n\n                override fun get(index: Int): Nothing = throw IndexOutOfBoundsException("Empty list doesn't contain element at index $index.")\n                override fun indexOf(element: Nothing): Int = -1\n                override fun lastIndexOf(element: Nothing): Int = -1\n\n                override fun iterator(): Iterator<Nothing> = EmptyIterator\n                override fun listIterator(): ListIterator<Nothing> = EmptyIterator\n                override fun listIterator(index: Int): ListIterator<Nothing> {\n                    if (index != 0) throw IndexOutOfBoundsException("Index: $index")\n                    return EmptyIterator\n                }\n\n                override fun subList(fromIndex: Int, toIndex: Int): List<Nothing> {\n                    if (fromIndex == 0 && toIndex == 0) return this\n                    throw IndexOutOfBoundsException("fromIndex: $fromIndex, toIndex: $toIndex")\n                }\n\n                private fun readResolve(): Any = EmptyList\n            }\n            internal fun <T> Array<out T>.asCollection(): Collection<T> = ArrayAsCollection(this, isVarargs = false)\n            private class ArrayAsCollection<T>(val values: Array<out T>, val isVarargs: Boolean) : Collection<T> {\n                override val size: Int get() = values.size\n                override fun isEmpty(): Boolean = values.isEmpty()\n                override fun contains(element: T): Boolean = values.contains(element)\n                override fun containsAll(elements: Collection<T>): Boolean = elements.all { contains(it) }\n                override fun iterator():

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Iterator<T> = values.iterator()\n // override hidden toArray implementation to prevent copying of values array\n
public fun toArray(): Array<out Any?> = values.copyToArrayOfAny(isVarargs)\n\n/**\n * Returns an empty read-only list. The returned list is serializable (JVM).\n * @sample
samples.collections.Collections.Lists.emptyReadOnlyList\n *^npublic fun <T> emptyList(): List<T> =
EmptyList\n\n/**\n * Returns a new read-only list of given elements. The returned list is serializable (JVM).\n *
@sample samples.collections.Collections.Lists.readOnlyList\n *^npublic fun <T> listOf(vararg elements: T):
List<T> = if (elements.size > 0) elements.asList() else emptyList()\n\n/**\n * Returns an empty read-only list. The returned list is serializable (JVM).\n *
@sample samples.collections.Collections.Lists.emptyReadOnlyList\n *^n@kotlin.internal.InlineOnly\npublic inline fun <T> listOf(): List<T> = emptyList()\n\n/**\n * Returns an empty new [MutableList].\n * @sample samples.collections.Collections.Lists.emptyMutableList\n *^n@kotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> mutableListOf(): MutableList<T> =
ArrayList()\n\n/**\n * Returns an empty new [ArrayList].\n * @sample
samples.collections.Collections.Lists.emptyArrayList\n *^n@kotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> arrayListOf(): ArrayList<T> =
ArrayList()\n\n/**\n * Returns a new [MutableList] with the given elements.\n * @sample
samples.collections.Collections.Lists.mutableList\n *^npublic fun <T> mutableListOf(vararg elements: T):
MutableList<T> =\n if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs =
true))\n\n/**\n * Returns a new [ArrayList] with the given elements.\n * @sample
samples.collections.Collections.Lists.arrayList\n *^npublic fun <T> arrayListOf(vararg elements: T): ArrayList<T>
=\n if (elements.size == 0) ArrayList() else ArrayList(ArrayAsCollection(elements, isVarargs = true))\n\n/**\n * Returns a new read-only list either of single given element, if it is not null, or empty list if the element is null. The returned list is serializable (JVM).\n *
@sample samples.collections.Collections.Lists.listOfNotNull\n *^npublic fun
<T : Any> listOfNotNull(element: T?): List<T> = if (element != null) listOf(element) else emptyList()\n\n/**\n * Returns a new read-only list only of those given elements, that are not null. The returned list is serializable (JVM).\n *
@sample samples.collections.Collections.Lists.listOfNotNull\n *^npublic fun <T : Any>
listOfNotNull(vararg elements: T?): List<T> = elements.filterNotNull()\n\n/**\n * Creates a new read-only list with the specified [size], where each element is calculated by calling the specified\n * [init] function.\n * The function [init] is called for each list element sequentially starting from the first one.\n * It should return the value for a list element given its index.\n * @sample samples.collections.Collections.Lists.readOnlyListFromInitializer\n *^n@kotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> List(size: Int, init: (index: Int) -> T): List<T> = MutableList(size, init)\n\n/**\n * Creates a new mutable list with the specified [size], where each element is calculated by calling the specified\n * [init] function.\n * The function [init] is called for each list element sequentially starting from the first one.\n * It should return the value for a list element given its index.\n * @sample samples.collections.Collections.Lists.mutableListFromInitializer\n *^n@kotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> MutableList(size: Int, init: (index: Int) -> T): MutableList<T> {\n val list = ArrayList<T>(size)\n repeat(size) { index -> list.add(init(index)) }\n return list\n}\n\n/**\n * Builds a new read-only [List] by populating a [MutableList] using the given [builderAction]\n * and returning a read-only list with the same elements.\n * The list passed as a receiver to the [builderAction] is valid only inside that function.\n * Using it outside of the function produces an unspecified behavior.\n * The returned list is serializable (JVM).\n * @sample
samples.collections.Builders.Lists.buildListSample\n *^n@kotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <E> buildList(@BuilderInference builderAction: MutableList<E>().->Unit): List<E> {\n contract {
callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) }\n return
buildListInternal(builderAction)\n}\n\n@PublishedApi\n@kotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal expect inline fun <E> buildListInternal(builderAction: MutableList<E>().->Unit): List<E>\n\n/**\n * Builds a new read-only [List] by populating a [MutableList] using the given [builderAction]\n * and returning a read-only list with the same elements.\n * The list passed as a receiver to the [builderAction] is valid only inside that

```

function.\n \* Using it outside of the function produces an unspecified behavior.\n \*\n \* The returned list is serializable (JVM).\n \*\n \* [capacity] is used to hint the expected number of elements added in the [builderAction].\n \*\n \* @throws IllegalArgumentException if the given [capacity] is negative.\n \*\n \* @sample samples.collections.Builders.Lists.buildListSampleWithCapacity\n \*\n @SinceKotlin("1.6")\n @WasExperimental(ExperimentalStdlibApi::class)\n @kotlin.internal.InlineOnly\n public inline fun <E> buildList(capacity: Int, @BuilderInference builderAction: MutableList<E>().->Unit): List<E> {\n contract { callsInPlace(builderAction, InvocationKind.EXACTLY\_ONCE) }\n return buildListInternal(capacity, builderAction)\n }\n\n @PublishedApi\n @SinceKotlin("1.3")\n @kotlin.internal.InlineOnly\n internal expect inline fun <E> buildListInternal(capacity: Int, builderAction: MutableList<E>().->Unit): List<E>\n\n /\*\*\n \* Returns an [IntRange] of the valid indices for this collection.\n \* @sample samples.collections.Collections.Collections.indicesOfCollection\n \*\n public val Collection<\*>.indices: IntRange\n get() = 0..size - 1\n\n /\*\*\n \* Returns the index of the last item in the list or -1 if the list is empty.\n \*\n \* @sample samples.collections.Collections.Lists.lastIndexOfList\n \*\n public val <T> List<T>.lastIndex: Int\n get() = this.size - 1\n\n /\*\*\n \* Returns `true` if the collection is not empty.\n \* @sample samples.collections.Collections.Collections.collectionIsNotEmpty\n \*\n @kotlin.internal.InlineOnly\n public inline fun <T> Collection<T>.isNotEmpty(): Boolean = !isEmpty()\n\n /\*\*\n \* Returns `true` if this nullable collection is either null or empty.\n \* @sample samples.collections.Collections.Collections.collectionIsNullOrEmpty\n \*\n @SinceKotlin("1.3")\n @kotlin.internal.InlineOnly\n public inline fun <T> Collection<T>?.isNullOrEmpty(): Boolean {\n contract {\n returns(false) implies (this@isNullOrEmpty != null)\n }\n return this == null || this.isEmpty()\n }\n\n /\*\*\n \* Returns this Collection if it's not `null` and the empty list otherwise.\n \* @sample samples.collections.Collections.Collections.collectionOrElse\n \*\n @kotlin.internal.InlineOnly\n public inline fun <T> Collection<T>?.orElse(): Collection<T> = this ?: emptyList()\n\n /\*\*\n \* Returns this List if it's not `null` and the empty list otherwise.\n \* @sample samples.collections.Collections.Lists.listOrElse\n \*\n @kotlin.internal.InlineOnly\n public inline fun <T> List<T>?.orElse(): List<T> = this ?: emptyList()\n\n /\*\*\n \* Returns this collection if it's not empty\n \* or the result of calling [defaultValue] function if the collection is empty.\n \*\n \* @sample samples.collections.Collections.Collections.collectionIfEmpty\n \*\n @SinceKotlin("1.3")\n @kotlin.internal.InlineOnly\n public inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : Collection<\*>, C : R =\n if (isEmpty()) defaultValue() else this\n\n /\*\*\n \* Checks if all elements in the specified collection are contained in this collection.\n \*\n \* Allows to overcome type-safety restriction of `containsAll` that requires to pass a collection of type `Collection<E>`.\n \* @sample samples.collections.Collections.Collections.collectionContainsAll\n \*\n @Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER") // false warning, extension takes precedence in some cases\n @kotlin.internal.InlineOnly\n public inline fun <@kotlin.internal.OnlyInputTypes T> Collection<T>.containsAll(elements: Collection<T>): Boolean = this.containsAll(elements)\n\n /\*\*\n \* Returns a new list with the elements of this list randomly shuffled\n \* using the specified [random] instance as the source of randomness.\n \*\n @SinceKotlin("1.3")\n public fun <T> Iterable<T>.shuffled(random: Random): List<T> = toMutableList().apply { shuffle(random) }\n\n internal fun <T> List<T>.optimizeReadOnlyList() = when (size) {\n 0 -> emptyList()\n 1 -> listOf(this[0])\n else -> this\n }\n\n /\*\*\n \* Searches this list or its range for the provided [element] using the binary search algorithm.\n \* The list is expected to be sorted into ascending order according to the Comparable natural ordering of its elements,\n \* otherwise the result is undefined.\n \*\n \* If the list contains multiple elements equal to the specified [element], there is no guarantee which one will be found.\n \*\n \* `null` value is considered to be less than any non-null value.\n \*\n \* @return the index of the element, if it is contained in the list within the specified range;\n \* otherwise, the inverted insertion point `(-insertion point - 1)`.\n \* The insertion point is defined as the index at which the element should be inserted,\n \* so that the list (or the specified subrange of list) still remains sorted.\n \* @sample samples.collections.Collections.Lists.binarySearchOnComparable\n \*\n @sample samples.collections.Collections.Lists.binarySearchWithBoundaries\n \*\n public fun <T : Comparable<T>> List<T?>.binarySearch(element: T?, fromIndex: Int = 0, toIndex: Int = size): Int {\n rangeCheck(size, fromIndex,

```

toIndex)\n\n    var low = fromIndex\n    var high = toIndex - 1\n\n    while (low <= high) {\n        val mid = (low +
high).ushr(1) // safe from overflows\n        val midVal = get(mid)\n        val cmp = compareValues(midVal,
element)\n\n        if (cmp < 0)\n            low = mid + 1\n        else if (cmp > 0)\n            high = mid - 1\n        else\n            return mid // key found\n    }\n    return -(low + 1) // key not found\n}\n\n/**\n * Searches this list or its range
for the provided [element] using the binary search algorithm.\n * The list is expected to be sorted into ascending
order according to the specified [comparator],\n * otherwise the result is undefined.\n * \n * If the list contains
multiple elements equal to the specified [element], there is no guarantee which one will be found.\n * \n * `null`
value is considered to be less than any non-null value.\n * \n * @return the index of the element, if it is contained in
the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion point - 1)`.\n * The
insertion point is defined as the index at which the element should be inserted,\n * so that the list (or the specified
subrange of list) still remains sorted according to the specified [comparator].\n * \n * @sample
samples.collections.Collections.Lists.binarySearchWithComparator\n */\n\npublic fun <T>
List<T>.binarySearch(element: T, comparator: Comparator<in T>, fromIndex: Int = 0, toIndex: Int = size): Int {\n
    rangeCheck(size, fromIndex, toIndex)\n\n    var low = fromIndex\n    var high = toIndex - 1\n\n    while (low <=
high) {\n        val mid = (low + high).ushr(1) // safe from overflows\n        val midVal = get(mid)\n        val cmp =
comparator.compare(midVal, element)\n\n        if (cmp < 0)\n            low = mid + 1\n        else if (cmp > 0)\n
            high = mid - 1\n        else\n            return mid // key found\n    }\n    return -(low + 1) // key not found\n}\n\n/**\n * Searches this list or its range for an element having the key returned by the specified [selector] function\n * equal to
the provided [key] value using the binary search algorithm.\n * The list is expected to be sorted into ascending order
according to the Comparable natural ordering of keys of its elements.\n * otherwise the result is undefined.\n * \n * If
the list contains multiple elements with the specified [key], there is no guarantee which one will be found.\n * \n * `null`
value is considered to be less than any non-null value.\n * \n * @return the index of the element with the
specified [key], if it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-
insertion point - 1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so
that the list (or the specified subrange of list) still remains sorted.\n * \n * @sample
samples.collections.Collections.Lists.binarySearchByKey\n */\n\npublic inline fun <T, K : Comparable<K>>
List<T>.binarySearchBy(\n    key: K?,\n    fromIndex: Int = 0,\n    toIndex: Int = size,\n    crossinline selector: (T) ->
K?):\n    Int =\n    binarySearch(fromIndex, toIndex) { compareValues(selector(it), key) }\n\n// do not introduce this
overload --- too rare\n//\npublic fun <T, K> List<T>.binarySearchBy(key: K, comparator: Comparator<K>,\n    fromIndex: Int = 0, toIndex: Int = size(), selector: (T) -> K): Int =\n    binarySearch(fromIndex, toIndex) {\n        comparator.compare(selector(it), key) }\n\n\n/**\n * Searches this list or its range for an element for which the
given [comparison] function returns zero using the binary search algorithm.\n * \n * The list is expected to be sorted
so that the signs of the [comparison] function's return values ascend on the list elements,\n * i.e. negative values
come before zero and zeroes come before positive values.\n * Otherwise, the result is undefined.\n * \n * If the list
contains multiple elements for which [comparison] returns zero, there is no guarantee which one will be found.\n * \n *
@param comparison function that returns zero when called on the list element being searched.\n * On the
elements coming before the target element, the function must return negative values;\n * on the elements coming
after the target element, the function must return positive values.\n * \n * @return the index of the found element, if
it is contained in the list within the specified range;\n * otherwise, the inverted insertion point `(-insertion point -
1)`.\n * The insertion point is defined as the index at which the element should be inserted,\n * so that the list (or
the specified subrange of list) still remains sorted.\n * \n * @sample
samples.collections.Collections.Lists.binarySearchWithComparisonFunction\n */\n\npublic fun <T>
List<T>.binarySearch(fromIndex: Int = 0, toIndex: Int = size, comparison: (T) -> Int): Int {\n    rangeCheck(size,
fromIndex, toIndex)\n\n    var low = fromIndex\n    var high = toIndex - 1\n\n    while (low <= high) {\n        val mid
= (low + high).ushr(1) // safe from overflows\n        val midVal = get(mid)\n        val cmp = comparison(midVal)\n\n        if (cmp < 0)\n            low = mid + 1\n        else if (cmp > 0)\n            high = mid - 1\n        else\n            return
mid // key found\n    }\n    return -(low + 1) // key not found\n}\n\n\n/**\n * Checks that `from` and `to` are in\n * the
range of [0..size] and throws an appropriate exception, if they aren't.\n * \n * @private fun rangeCheck(size: Int,

```

```

fromIndex: Int, toIndex: Int) {
    when {
        fromIndex > toIndex -> throw
IllegalArgumentException("fromIndex ($fromIndex) is greater than toIndex ($toIndex).")
        fromIndex < 0 ->
throw IndexOutOfBoundsException("fromIndex ($fromIndex) is less than zero.")
        toIndex > size -> throw
IndexOutOfBoundsException("toIndex ($toIndex) is greater than size ($size).")
    }
}
@PublishedApi
@SinceKotlin("1.3")
internal expect fun checkIndexOverflow(index: Int):
Int
@PublishedApi
@SinceKotlin("1.3")
internal expect fun checkCountOverflow(count: Int):
Int
@PublishedApi
@SinceKotlin("1.3")
internal fun throwIndexOverflow() { throw
ArithmeticException("Index overflow has happened.") }
@PublishedApi
@SinceKotlin("1.3")
internal fun
throwCountOverflow() { throw ArithmeticException("Count overflow has happened.") }
/* Copyright
2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.
Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
*/
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("MapsKt")
@file:OptIn(kotlin.experimental.
ExperimentalTypeInference::class)
package kotlin.collections
import kotlin.contracts.*
private object
EmptyMap : Map<Any?, Nothing>, Serializable {
    private const val serialVersionUID: Long =
8246714829545688274
    override fun equals(other: Any?): Boolean = other is Map<*, *> &&
other.isEmpty()
    override fun hashCode(): Int = 0
    override fun toString(): String = "{}"
    override val
size: Int get() = 0
    override fun isEmpty(): Boolean = true
    override fun containsKey(key: Any?): Boolean =
false
    override fun containsValue(value: Nothing): Boolean = false
    override fun get(key: Any?): Nothing? =
null
    override val entries: Set<Map.Entry<Any?, Nothing>> get() = EmptySet
    override val keys: Set<Any?>
get() = EmptySet
    override val values: Collection<Nothing> get() = EmptyList
    private fun readResolve():
Any = EmptyMap
}
/** Returns an empty read-only map of specified type.
The returned map is
serializable (JVM).
@sample samples.collections.Maps.Instantiation.emptyReadOnlyMap
*/
public fun <K,
V> emptyMap(): Map<K, V> = @Suppress("UNCHECKED_CAST") (EmptyMap as Map<K, V>)
/** Returns a new read-only map with the specified contents, given as a list of pairs
where the first value is the key
and the second is the value.
If multiple pairs have the same key, the resulting map will contain the value
from the last of those pairs.
Entries of the map are iterated in the order they were specified.
The
returned map is serializable (JVM).
@sample samples.collections.Maps.Instantiation.mapFromPairs
*/
public fun <K, V> mapOf(vararg pairs: Pair<K, V>): Map<K, V> =
if (pairs.size > 0)
pairs.toMap(LinkedHashMap(mapCapacity(pairs.size))) else emptyMap()
/** Returns an empty read-only
map.
The returned map is serializable (JVM).
@sample
samples.collections.Maps.Instantiation.emptyReadOnlyMap
*/
@kotlin.internal.InlineOnly
public inline fun
<K, V> mapOf(): Map<K, V> = emptyMap()
/** Returns an empty new [MutableMap].
The returned
map preserves the entry iteration order.
@sample samples.collections.Maps.Instantiation.emptyMutableMap
*/
@SinceKotlin("1.1")
@kotlin.internal.InlineOnly
public inline fun <K, V> mutableMapOf():
MutableMap<K, V> = LinkedHashMap()
/** Returns a new [MutableMap] with the specified contents, given
as a list of pairs
where the first component is the key and the second is the value.
If multiple pairs have
the same key, the resulting map will contain the value from the last of those pairs.
Entries of the map are
iterated in the order they were specified.
@sample
samples.collections.Maps.Instantiation.mutableMapFromPairs
@sample
samples.collections.Maps.Instantiation.emptyMutableMap
*/
public fun <K, V> mutableMapOf(vararg pairs:
Pair<K, V>): MutableMap<K, V> =
LinkedHashMap<K, V>(mapCapacity(pairs.size)).apply { putAll(pairs)
}
/** Returns an empty new [HashMap].
@sample
samples.collections.Maps.Instantiation.emptyHashMap
*/
@SinceKotlin("1.1")
@kotlin.internal.InlineOnly
public inline fun <K, V> hashMapOf(): HashMap<K, V>
= HashMap<K, V>()
/** Returns a new [HashMap] with the specified contents, given as a list of pairs
where the first component is the key and the second is the value.
@sample
samples.collections.Maps.Instantiation.hashMapFromPairs
*/
public fun <K, V> hashMapOf(vararg pairs:
Pair<K, V>): HashMap<K, V> = HashMap<K, V>(mapCapacity(pairs.size)).apply { putAll(pairs) }

```

Returns an empty new [LinkedHashMap].

```

@SinceKotlin("1.1")
@kotlin.internal.InlineOnly
public inline
fun <K, V> linkedMapOf(): LinkedHashMap<K, V> = LinkedHashMap<K, V>()

```

Returns a new [LinkedHashMap] with the specified contents, given as a list of pairs where the first component is the key and the second is the value. If multiple pairs have the same key, the resulting map will contain the value from the last of those pairs. Entries of the map are iterated in the order they were specified.

```

@sample
samples.collections.Maps.Instantiation.linkedMapFromPairs

```

```

public fun <K, V> linkedMapOf(vararg pairs:
Pair<K, V>): LinkedHashMap<K, V> = pairs.toMap(LinkedHashMap(mapCapacity(pairs.size)))

```

Builds a new read-only [Map] by populating a [MutableMap] using the given [builderAction] and returning a read-only map with the same key-value pairs. The map passed as a receiver to the [builderAction] is valid only inside that function. Using it outside of the function produces an unspecified behavior. Entries of the map are iterated in the order they were added by the [builderAction]. The returned map is serializable (JVM).

```

@sample
samples.collections.Builders.Maps.buildMapSample

```

```

@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <K, V> buildMap(@BuilderInference builderAction: MutableMap<K, V>().->Unit): Map<K, V> {
    contract { callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) }
    return
    buildMapInternal(builderAction)
}

```

```

@PublishedApi
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
internal expect inline fun <K, V> buildMapInternal(builderAction: MutableMap<K, V>().->Unit): Map<K,
V>

```

Builds a new read-only [Map] by populating a [MutableMap] using the given [builderAction] and returning a read-only map with the same key-value pairs. The map passed as a receiver to the [builderAction] is valid only inside that function. Using it outside of the function produces an unspecified behavior. [capacity] is used to hint the expected number of pairs added in the [builderAction]. Entries of the map are iterated in the order they were added by the [builderAction]. The returned map is serializable (JVM). @throws IllegalArgumentException if the given [capacity] is negative.

```

@sample
samples.collections.Builders.Maps.buildMapSample

```

```

@SinceKotlin("1.6")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public inline fun <K, V> buildMap(capacity: Int, @BuilderInference builderAction: MutableMap<K, V>().->Unit):
Map<K, V> {
    contract { callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) }
    return
    buildMapInternal(capacity,
    builderAction)
}

```

```

@PublishedApi
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
internal expect inline
fun <K, V> buildMapInternal(capacity: Int, builderAction: MutableMap<K, V>().->Unit): Map<K, V>

```

Calculate the initial capacity of a map.

```

@PublishedApi
internal expect fun mapCapacity(expectedSize: Int):
Int

```

Returns `true` if this map is not empty.

```

@sample
samples.collections.Maps.Usage.mapIsNotEmpty

```

```

@kotlin.internal.InlineOnly
public inline fun <K, V>
Map<out K, V>.isEmpty(): Boolean = !isNotEmpty()

```

Returns `true` if this nullable map is either null or empty.

```

@sample
samples.collections.Maps.Usage.mapIsNullOrEmpty

```

```

@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
public inline fun <K, V> Map<out K,
V>?.isEmpty(): Boolean {
    contract {
        returns(false) implies (this@isEmpty != null)
    }
    return this == null || isEmpty()
}

```

Returns the [Map] if its not `null`, or the empty [Map] otherwise.

```

@sample
samples.collections.Maps.Usage.mapOrElse

```

```

@kotlin.internal.InlineOnly
public inline fun
<K, V> Map<K, V>?.orElse(): Map<K, V> = this ?: emptyMap()

```

Returns this map if it's not empty or the result of calling [defaultValue] function if the map is empty.

```

@sample
samples.collections.Maps.Usage.mapIfEmpty

```

```

@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
public
inline fun <M, R> M.ifEmpty(defaultValue: () -> R): R where M : Map<*, *>, M : R =
    if (isEmpty())
    defaultValue() else this

```

Checks if the map contains the given key. This method allows to use the `x in map` syntax for checking whether an object is contained in the map.

```

@sample
samples.collections.Maps.Usage.containsKey

```

```

@kotlin.internal.OnlyInputTypes K, V> Map<out K, V>.contains(key: K): Boolean = containsKey(key)

```

Returns the value corresponding to the given [key], or `null` if such a key is not present in the map.

```

*  

@kotlin.internal.InlineOnly  

public inline operator fun <@kotlin.internal.OnlyInputTypes K, V> Map<out K,  

V>.get(key: K): V? =  

    @Suppress("UNCHECKED_CAST") (this as Map<K, V>).get(key)  

    * Allows  

to use the index operator for storing values in a mutable map.  

*  

@kotlin.internal.InlineOnly  

public inline  

operator fun <K, V> MutableMap<K, V>.set(key: K, value: V): Unit {  

    put(key, value)  

}
* Returns  

`true` if the map contains the specified [key].  

* Allows to overcome type-safety restriction of `containsKey`  

that requires to pass a key of type `K`.  

*  

@kotlin.internal.InlineOnly  

public inline fun  

<@kotlin.internal.OnlyInputTypes K> Map<out K, *>.containsKey(key: K): Boolean =  

    @Suppress("UNCHECKED_CAST") (this as Map<K, *>).containsKey(key)  

    * Returns `true` if the map  

maps one or more keys to the specified [value].  

* Allows to overcome type-safety restriction of  

`containsValue` that requires to pass a value of type `V`.  

*  

@sample  

samples.collections.Maps.Usage.containsValue  

*  

@Suppress("EXTENSION_SHADOWED_BY_MEMBER")  

// false warning, extension takes precedence in some cases  

@kotlin.internal.InlineOnly  

public inline fun <K,  

@kotlin.internal.OnlyInputTypes V> Map<K, V>.containsValue(value: V): Boolean =  

    this.containsValue(value)  

    * Removes the specified key and its corresponding value from this map.  

    *  

@return the previous value associated with the key, or `null` if the key was not present in the map.  

    * Allows to  

overcome type-safety restriction of `remove` that requires to pass a key of type `K`.  

*  

@kotlin.internal.InlineOnly  

public inline fun <@kotlin.internal.OnlyInputTypes K, V> MutableMap<out K,  

V>.remove(key: K): V? =  

    @Suppress("UNCHECKED_CAST") (this as MutableMap<K,  

V>).remove(key)  

    * Returns the key component of the map entry.  

    * This method allows to use  

destructuring declarations when working with maps, for example:  

    *  

`for ((key, value) in map) {`  

    * // do  

something with the key and the value  

}`  

*  

@kotlin.internal.InlineOnly  

public inline operator fun <K,  

V> Map.Entry<K, V>.component1(): K = key  

    * Returns the value component of the map entry.  

    *  

This method allows to use destructuring declarations when working with maps, for example:  

    *  

`for ((key, value) in map) {`  

    * // do something with the key and the value  

}`  

*  

@kotlin.internal.InlineOnly  

public inline operator fun <K, V> Map.Entry<K, V>.component2(): V =  

    value  

    * Converts entry to [Pair] with key being first component and value being second.  

*  

@kotlin.internal.InlineOnly  

public inline fun <K, V> Map.Entry<K, V>.toPair(): Pair<K, V> = Pair(key,  

value)  

    * Returns the value for the given key, or the result of the [defaultValue] function if there was no  

entry for the given key.  

    *  

@sample samples.collections.Maps.Usage.getOrNull  

*  

@kotlin.internal.InlineOnly  

public inline fun <K, V> Map<K, V>.getOrNull(key: K, defaultValue: () -> V): V  

= get(key) ?: defaultValue()  

    *  

internal inline fun <K, V> Map<K, V>.getOrNullNullable(key: K, defaultValue: ()  

-> V): V {  

    val value = get(key)  

    if (value == null && !containsKey(key))  

        return defaultValue()  

    }  

    else {  

        @Suppress("UNCHECKED_CAST")  

        return value as V  

    }  

    * Returns the value  

for the given [key] or throws an exception if there is no such key in the map.  

    *  

If the map was created by  

[withDefault], resorts to its `defaultValue` provider function  

    * instead of throwing an exception.  

    *  

@throws  

NoSuchElementException when the map doesn't contain a value for the specified key and  

    * no implicit default  

value was provided for that map.  

*  

@SinceKotlin("1.1")  

public fun <K, V> Map<K, V>.getValue(key: K): V  

= getOrImplicitDefault(key)  

    * Returns the value for the given key. If the key is not found in the map, calls  

the [defaultValue] function,  

    * puts its result into the map under the given key and returns it.  

    *  

Note that the  

operation is not guaranteed to be atomic if the map is being modified concurrently.  

    *  

@sample  

samples.collections.Maps.Usage.getOrPut  

*  

public inline fun <K, V> MutableMap<K, V>.getOrPut(key: K,  

defaultValue: () -> V): V {  

    val value = get(key)  

    return if (value == null) {  

        val answer =  

defaultValue()  

        put(key, answer)  

        answer  

    } else {  

        value  

    }  

}
* Returns an  

[Iterator] over the entries in the [Map].  

    *  

@sample samples.collections.Maps.Usage.forOverEntries  

*  

@kotlin.internal.InlineOnly  

public inline operator fun <K, V> Map<out K, V>.iterator():  

Iterator<Map.Entry<K, V>> = entries.iterator()  

    * Returns a [MutableIterator] over the mutable entries in  

the [MutableMap].  

    *  

@kotlin.jvm.JvmName("mutableIterator")  

@kotlin.internal.InlineOnly  

public  

inline operator fun <K, V> MutableMap<K, V>.iterator(): MutableIterator<MutableMap.MutableEntry<K, V>> =

```

`entries.iterator()` Populates the given [destination] map with entries having the keys of this map and the values obtained by applying the [transform] function to each entry in this [Map].
   
`public inline fun <K, V, R, M : MutableMap<in K, in R>> Map<out K, V>.mapValuesTo(destination: M, transform: (Map.Entry<K, V>) -> R): M`
  
`{\n return entries.associateByTo(destination, { it.key }, transform)}`
  
 Populates the given [destination] map with entries having the keys obtained by applying the [transform] function to each entry in this [Map] and the values of this map.
   
 In case if any two entries are mapped to the equal keys, the value of the latter one will overwrite the value associated with the former one.
   
`public inline fun <K, V, R, M : MutableMap<in R, in V>> Map<out K, V>.mapKeysTo(destination: M, transform: (Map.Entry<K, V>) -> R): M`
  
`{\n return entries.associateByTo(destination, transform, { it.value })}`
  
 Puts all the given [pairs] into this [MutableMap] with the first component in the pair being the key and the second the value.
   
`public fun <K, V> MutableMap<in K, in V>.putAll(pairs: Array<out Pair<K, V>>): Unit`
  
`{\n for ((key, value) in pairs) {\n put(key, value)\n }}`
  
 Puts all the elements of the given collection into this [MutableMap] with the first component in the pair being the key and the second the value.
   
`public fun <K, V> MutableMap<in K, in V>.putAll(pairs: Iterable<Pair<K, V>>): Unit`
  
`{\n for ((key, value) in pairs) {\n put(key, value)\n }}`
  
 Puts all the elements of the given sequence into this [MutableMap] with the first component in the pair being the key and the second the value.
   
`public fun <K, V> MutableMap<in K, in V>.putAll(pairs: Sequence<Pair<K, V>>): Unit`
  
`{\n for ((key, value) in pairs) {\n put(key, value)\n }}`
  
 Returns a new map with entries having the keys of this map and the values obtained by applying the [transform] function to each entry in this [Map].
   
 The returned map preserves the entry iteration order of the original map.
   
`@sample samples.collections.Maps.Transformations.mapValues`
  
`public inline fun <K, V, R> Map<out K, V>.mapValues(transform: (Map.Entry<K, V>) -> R): Map<K, R>`
  
`{\n return mapValuesTo(LinkedHashMap<K, R>(mapCapacity(size)), transform) // .optimizeReadOnlyMap()`
  
 Returns a new Map with entries having the keys obtained by applying the [transform] function to each entry in this [Map] and the values of this map.
   
 In case if any two entries are mapped to the equal keys, the value of the latter one will overwrite the value associated with the former one.
   
 The returned map preserves the entry iteration order of the original map.
   
`@sample samples.collections.Maps.Transformations.mapKeys`
  
`public inline fun <K, V, R> Map<out K, V>.mapKeys(transform: (Map.Entry<K, V>) -> R): Map<R, V>`
  
`{\n return mapKeysTo(LinkedHashMap<R, V>(mapCapacity(size)), transform) // .optimizeReadOnlyMap()`
  
 Returns a map containing all key-value pairs with keys matching the given [predicate].
   
 The returned map preserves the entry iteration order of the original map.
   
`@sample samples.collections.Maps.Filtering.filterKeys`
  
`public inline fun <K, V> Map<out K, V>.filterKeys(predicate: (K) -> Boolean): Map<K, V>`
  
`{\n val result = LinkedHashMap<K, V>()\n for (entry in this) {\n if (predicate(entry.key)) {\n result.put(entry.key, entry.value)\n }\n }\n return result}`
  
 Returns a map containing all key-value pairs with values matching the given [predicate].
   
 The returned map preserves the entry iteration order of the original map.
   
`@sample samples.collections.Maps.Filtering.filterValues`
  
`public inline fun <K, V> Map<out K, V>.filterValues(predicate: (V) -> Boolean): Map<K, V>`
  
`{\n val result = LinkedHashMap<K, V>()\n for (entry in this) {\n if (predicate(entry.value)) {\n result.put(entry.key, entry.value)\n }\n }\n return result}`
  
 Appends all entries matching the given [predicate] into the mutable map given as [destination] parameter.
   
 @return the destination map.
   
`@sample samples.collections.Maps.Filtering.filterTo`
  
`public inline fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.filterTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M`
  
`{\n for (element in this) {\n if (predicate(element)) {\n destination.put(element.key, element.value)\n }\n }\n return destination}`
  
 Returns a new map containing all key-value pairs matching the given [predicate].
   
 The returned map preserves the entry iteration order of the original map.
   
`@sample samples.collections.Maps.Filtering.filter`
  
`public inline fun <K, V> Map<out K, V>.filter(predicate: (Map.Entry<K, V>) -> Boolean): Map<K, V>`
  
`{\n return filterTo(LinkedHashMap<K, V>(), predicate)}`
  
 Appends all entries not matching the given [predicate] into the given [destination].
   
 @return the destination map.
   
`@sample samples.collections.Maps.Filtering.filterNotTo`
  
`public inline fun <K, V, M : MutableMap<in K, in V>>`

```

Map<out K, V>.filterNotTo(destination: M, predicate: (Map.Entry<K, V>) -> Boolean): M {
    for (element in this)
        if (!predicate(element))
            destination.put(element.key, element.value)
    return destination
}

Returns a new map containing all key-value pairs not matching the given [predicate].

The returned map preserves the entry iteration order of the original map.

@sample
samples.collections.Maps.Filtering.filterNot

public inline fun <K, V> Map<out K, V>.filterNot(predicate:
(Map.Entry<K, V>) -> Boolean): Map<K, V> {
    return filterNotTo(LinkedHashMap<K, V>(),
predicate)
}

Returns a new map containing all key-value pairs from the given collection of pairs.

The returned map preserves the entry iteration order of the original collection.

If any of two pairs would have the same key the last one gets added to the map.

public fun <K, V> Iterable<Pair<K, V>>.toMap(): Map<K, V> {
    if (this is Collection)
        return when (size) {
            0 -> emptyMap()
            1 -> mapOf(if (this is List) this[0] else iterator().next())
            else -> toMap(LinkedHashMap<K, V>(mapCapacity(size)))
        }
    return toMap(LinkedHashMap<K, V>()).optimizeReadOnlyMap()
}

Populates and returns the [destination] mutable map with key-value pairs from the given collection of pairs.

public fun <K, V, M : MutableMap<in K, in V>> Iterable<Pair<K, V>>.toMap(destination: M): M =
    destination.apply {
putAll(this@toMap)
}

Returns a new map containing all key-value pairs from the given array of pairs.

The returned map preserves the entry iteration order of the original array.

If any of two pairs would have the same key the last one gets added to the map.

public fun <K, V> Array<out Pair<K, V>>.toMap(): Map<K,
V> = when (size) {
    0 -> emptyMap()
    1 -> mapOf(this[0])
    else -> toMap(LinkedHashMap<K,
V>(mapCapacity(size)))
}

Populates and returns the [destination] mutable map with key-value pairs from the given array of pairs.

public fun <K, V, M : MutableMap<in K, in V>> Array<out Pair<K,
V>>.toMap(destination: M): M =
    destination.apply {
putAll(this@toMap)
}

Returns a new map containing all key-value pairs from the given sequence of pairs.

The returned map preserves the entry iteration order of the original sequence.

If any of two pairs would have the same key the last one gets added to the map.

public fun <K, V> Sequence<Pair<K, V>>.toMap(): Map<K, V> = toMap(LinkedHashMap<K,
V>()).optimizeReadOnlyMap()

Populates and returns the [destination] mutable map with key-value pairs from the given sequence of pairs.

public fun <K, V, M : MutableMap<in K, in V>> Sequence<Pair<K,
V>>.toMap(destination: M): M =
    destination.apply {
putAll(this@toMap)
}

Returns a new read-only map containing all key-value pairs from the original map.

The returned map preserves the entry iteration order of the original map.

@SinceKotlin("1.1")
public fun <K, V> Map<out K, V>.toMap(): Map<K, V> =
when (size) {
    0 -> emptyMap()
    1 -> singletonMap()
    else -> mutableMap()
}

Returns a new mutable map containing all key-value pairs from the original map.

The returned map preserves the entry iteration order of the original map.

@SinceKotlin("1.1")
public fun <K, V> Map<out K,
V>.toMutableMap(): MutableMap<K, V> = LinkedHashMap(this)

Populates and returns the [destination] mutable map with key-value pairs from the given map.

@SinceKotlin("1.1")
public fun <K, V, M : MutableMap<in K, in V>> Map<out K, V>.toMap(destination: M): M =
    destination.apply {
putAll(this@toMap)
}

Creates a new read-only map by replacing or adding an entry to this map from a given key-value [pair].

The returned map preserves the entry iteration order of the original map.

The [pair] is iterated in the end if it has a unique key.

public operator fun <K, V> Map<out K, V>.plus(pair:
Pair<K, V>): Map<K, V> =
    if (this.isEmpty()) mapOf(pair) else LinkedHashMap(this).apply {
put(pair.first, pair.second)
}

Creates a new read-only map by replacing or adding entries to this map from a given collection of key-value [pairs].

The returned map preserves the entry iteration order of the original map.

Those [pairs] with unique keys are iterated in the end in the order of [pairs] collection.

public operator fun <K, V> Map<out K, V>.plus(pairs: Iterable<Pair<K, V>>): Map<K, V> =
    if (this.isEmpty()) pairs.toMap() else LinkedHashMap(this).apply {
putAll(pairs)
}

Creates a new read-only map by replacing or adding entries to this map from a given array of key-value [pairs].

The returned map preserves the entry iteration order of the original map.

Those [pairs] with unique keys are iterated in the end in the order of [pairs] array.

public operator fun <K, V> Map<out K, V>.plus(pairs: Array<out Pair<K, V>>): Map<K, V> =
    if (this.isEmpty()) pairs.toMap() else LinkedHashMap(this).apply {
putAll(pairs)
}

Creates a new read-only map by

```

replacing or adding entries to this map from a given sequence of key-value [pairs].  
 \* The returned map preserves the entry iteration order of the original map.  
 \* Those [pairs] with unique keys are iterated in the end in the order of [pairs] sequence.  
 \* `LinkedHashMap(this).apply { putAll(pairs) }.optimizeReadOnlyMap()`  
 \* Creates a new read-only map by replacing or adding entries to this map from another [map].  
 \* The returned map preserves the entry iteration order of the original map.  
 \* Those entries of another [map] that are missing in this map are iterated in the end in the order of that [map].  
 \* `LinkedHashMap(this).apply { putAll(map) }`  
 \* Appends or replaces the given [pair] in this mutable map.  
 \* `put(pair.first, pair.second)`  
 \* Appends or replaces all pairs from the given collection of [pairs] in this mutable map.  
 \* `putAll(pairs)`  
 \* Appends or replaces all pairs from the given array of [pairs] in this mutable map.  
 \* `putAll(pairs)`  
 \* Appends or replaces all pairs from the given sequence of [pairs] in this mutable map.  
 \* `putAll(pairs)`  
 \* Appends or replaces all entries from the given [map] in this mutable map.  
 \* `putAll(map)`  
 \* Returns a map containing all entries of the original map except the entry with the given [key].  
 \* The returned map preserves the entry iteration order of the original map.  
 \* `toMutableMap().apply { minusAssign(key) }.optimizeReadOnlyMap()`  
 \* Returns a map containing all entries of the original map except those entries  
 \* the keys of which are contained in the given [keys] collection.  
 \* The returned map preserves the entry iteration order of the original map.  
 \* `toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()`  
 \* Returns a map containing all entries of the original map except those entries  
 \* the keys of which are contained in the given [keys] array.  
 \* The returned map preserves the entry iteration order of the original map.  
 \* `toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()`  
 \* Returns a map containing all entries of the original map except those entries  
 \* the keys of which are contained in the given [keys] sequence.  
 \* The returned map preserves the entry iteration order of the original map.  
 \* `toMutableMap().apply { minusAssign(keys) }.optimizeReadOnlyMap()`  
 \* Removes the entry with the given [key] from this mutable map.  
 \* `remove(key)`  
 \* Removes all entries the keys of which are contained in the given [keys] collection from this mutable map.  
 \* `removeAll(keys)`  
 \* Removes all entries the keys of which are contained in the given [keys] array from this mutable map.  
 \* `removeAll(keys)`  
 \* Removes all entries from the keys of which are contained in the given [keys] sequence from this mutable map.  
 \* `removeAll(keys)`  
 \* `do not expose for now`  
 \* `optimizeReadOnlyMap() = when (size) { 0 -> emptyMap() 1 -> toSingletonMapOrSelf() else -> this }`  
 \* Copyright 2010-2021 JetBrains s.r.o. and Kotlin

Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n

```

*\n\n@file:kotlin.jvm.JvmMultifileClass\n\n@file:kotlin.jvm.JvmName("SetsKt")\n\n@file:OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n\npackage kotlin.collections\n\nimport kotlin.contracts.*\n\ninternal object EmptySet : Set<Nothing>, Serializable {\n    private const val serialVersionUID: Long = 3406603774387020532\n\n    override fun equals(other: Any?): Boolean = other is Set<*> && other.isEmpty()\n\n    override fun hashCode(): Int = 0\n\n    override fun toString(): String = "[]"\n\n    override val size: Int get() = 0\n\n    override fun isEmpty(): Boolean = true\n\n    override fun contains(element: Nothing): Boolean = false\n\n    override fun containsAll(elements: Collection<Nothing>): Boolean = elements.isEmpty()\n\n    override fun iterator(): Iterator<Nothing> = EmptyIterator\n\n    private fun readResolve(): Any = EmptySet\n}\n\n/**\n * Returns an empty read-only set. The returned set is serializable (JVM).\n * @sample\n samples.collections.Collections.Sets.emptyReadOnlySet\n */\n\npublic fun <T> emptySet(): Set<T> = EmptySet\n\n/**\n * Returns a new read-only set with the given elements.\n * Elements of the set are iterated in the order they were specified.\n * The returned set is serializable (JVM).\n * @sample\n samples.collections.Collections.Sets.readOnlySet\n */\n\npublic fun <T> setOf(vararg elements: T): Set<T> = if (elements.size > 0) elements.toSet() else emptySet()\n\n/**\n * Returns an empty read-only set. The returned set is serializable (JVM).\n * @sample\n samples.collections.Collections.Sets.emptyReadOnlySet\n */\n\n@kotlin.internal.InlineOnly\npublic inline fun <T> setOf(): Set<T> = emptySet()\n\n/**\n * Returns an empty new [MutableSet].\n * The returned set preserves the element iteration order.\n * @sample\n samples.collections.Collections.Sets.emptyMutableSet\n */\n\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> mutableSetOf(): MutableSet<T> = LinkedHashSet()\n\n/**\n * Returns a new [MutableSet] with the given elements.\n * Elements of the set are iterated in the order they were specified.\n * @sample\n samples.collections.Collections.Sets.mutableSet\n */\n\npublic fun <T> mutableSetOf(vararg elements: T): MutableSet<T> = elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/**\n * Returns an empty new [HashSet].\n */\n\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> hashSetOf(): HashSet<T> = HashSet()\n\n/**\n * Returns a new [HashSet] with the given elements.\n */\n\npublic fun <T> hashSetOf(vararg elements: T): HashSet<T> = elements.toCollection(HashSet(mapCapacity(elements.size)))\n\n/**\n * Returns an empty new [LinkedHashSet].\n * @sample\n samples.collections.Collections.Sets.emptyLinkedHashSet\n */\n\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun <T> linkedSetOf(): LinkedHashSet<T> = LinkedHashSet()\n\n/**\n * Returns a new [LinkedHashSet] with the given elements.\n * Elements of the set are iterated in the order they were specified.\n * @sample\n samples.collections.Collections.Sets.linkedHashSet\n */\n\npublic fun <T> linkedSetOf(vararg elements: T): LinkedHashSet<T> = elements.toCollection(LinkedHashSet(mapCapacity(elements.size)))\n\n/**\n * Returns a new read-only set either with single given element, if it is not null, or empty set if the element is null.\n * The returned set is serializable (JVM).\n * @sample\n samples.collections.Collections.Sets.setOfNotNull\n */\n\n@SinceKotlin("1.4")\npublic fun <T : Any> setOfNotNull(element: T?): Set<T> = if (element != null) setOf(element) else emptySet()\n\n/**\n * Returns a new read-only set only with those given elements, that are not null.\n * Elements of the set are iterated in the order they were specified.\n * The returned set is serializable (JVM).\n * @sample\n samples.collections.Collections.Sets.setOfNotNull\n */\n\n@SinceKotlin("1.4")\npublic fun <T : Any> setOfNotNull(vararg elements: T?): Set<T> {\n    return elements.filterNotNullTo(LinkedHashSet())\n}\n\n/**\n * Builds a new read-only [Set] by populating a [MutableSet] using the given [builderAction]\n * and returning a read-only set with the same elements.\n * The set passed as a receiver to the [builderAction] is valid only inside that function.\n * Using it outside of the function produces an unspecified behavior.\n * Elements of the set are iterated in the order they were added by the [builderAction].\n * The returned set is serializable (JVM).\n * @sample\n samples.collections.Builders.Sets.buildSetSample\n */\n\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <E> buildSet(@BuilderInference builderAction: MutableSet<E>.() -> Unit): Set<E> {\n    contract {

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callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) } \n    return
buildSetInternal(builderAction) \n} \n\n@PublishedApi \n@SinceKotlin("1.3") \n@kotlin.internal.InlineOnly \ninternal expect inline fun <E> buildSetInternal(builderAction: MutableSet<E>().->Unit): Set<E> \n\n/** \n * Builds a
new read-only [Set] by populating a [MutableSet] using the given [builderAction] \n * and returning a read-only set
with the same elements. \n * \n * The set passed as a receiver to the [builderAction] is valid only inside that
function. \n * Using it outside of the function produces an unspecified behavior. \n * \n * [capacity] is used to hint the
expected number of elements added in the [builderAction]. \n * \n * Elements of the set are iterated in the order they
were added by the [builderAction]. \n * \n * The returned set is serializable (JVM). \n * \n * @throws
IllegalArgumentException if the given [capacity] is negative. \n * \n * @sample
samples.collections.Builders.Sets.buildSetSample \n
*/ \n\n@SinceKotlin("1.6") \n@WasExperimental(ExperimentalStdlibApi::class) \n@kotlin.internal.InlineOnly \npublic
inline fun <E> buildSet(capacity: Int, @BuilderInference builderAction: MutableSet<E>().->Unit): Set<E> { \n
contract { callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE) } \n    return buildSetInternal(capacity,
builderAction) \n} \n\n@PublishedApi \n@SinceKotlin("1.3") \n@kotlin.internal.InlineOnly \ninternal expect inline
fun <E> buildSetInternal(capacity: Int, builderAction: MutableSet<E>().->Unit): Set<E> \n\n/** Returns this Set
if it's not `null` and the empty set otherwise. */ \n\n@kotlin.internal.InlineOnly \npublic inline fun <T>
Set<T>?.orEmpty(): Set<T> = this ?: emptySet() \n\ninternal fun <T> Set<T>.optimizeReadOnlySet() = when (size)
{ \n    0 -> emptySet() \n    1 -> setOf(iterator().next()) \n    else -> this \n} \n\n"/** \n * Copyright 2010-2018 JetBrains
s.r.o. and Kotlin Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file. \n
*/ \n\n@file:kotlin.jvm.JvmMultifileClass \n@file:kotlin.jvm.JvmName("StringsKt") \n@file:Suppress("PLATFORM
_MAPPED_TO_KOTLIN") \n\npackage kotlin.text \n\n/** \n * Parses the string as a signed [Byte]
number and returns the result \n * or `null` if the string is not a valid representation of a number. \n
*/ \n\n@SinceKotlin("1.1") \npublic fun String.toByteArrayOrNull(): Byte? = toByteOrNull(radix = 10) \n\n/** \n * Parses
the string as a signed [Byte] number and returns the result \n * or `null` if the string is not a valid representation of a
number. \n * \n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number
conversion. \n */ \n\n@SinceKotlin("1.1") \npublic fun String.toByteArrayOrNull(radix: Int): Byte? { \n    val int =
this.toIntOrNull(radix) ?: return null \n    if (int < Byte.MIN_VALUE || int > Byte.MAX_VALUE) return null \n
return int.toByteArray() \n} \n\n/** \n * Parses the string as a [Short] number and returns the result \n * or `null` if the string
is not a valid representation of a number. \n */ \n\n@SinceKotlin("1.1") \npublic fun String.toShortOrNull(): Short? =
toShortOrNull(radix = 10) \n\n/** \n * Parses the string as a [Short] number and returns the result \n * or `null` if the
string is not a valid representation of a number. \n * \n * @throws IllegalArgumentException when [radix] is not a
valid radix for string to number conversion. \n */ \n\n@SinceKotlin("1.1") \npublic fun String.toShortOrNull(radix:
Int): Short? { \n    val int = this.toIntOrNull(radix) ?: return null \n    if (int < Short.MIN_VALUE || int >
Short.MAX_VALUE) return null \n    return int.toShort() \n} \n\n/** \n * Parses the string as an [Int] number and
returns the result \n * or `null` if the string is not a valid representation of a number. \n
*/ \n\n@SinceKotlin("1.1") \npublic fun String.toIntOrNull(): Int? = toIntOrNull(radix = 10) \n\n/** \n * Parses the
string as an [Int] number and returns the result \n * or `null` if the string is not a valid representation of a number. \n
*/ \n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion. \n
*/ \n\n@SinceKotlin("1.1") \npublic fun String.toIntOrNull(radix: Int): Int? { \n    checkRadix(radix) \n\n    val length
= this.length \n    if (length == 0) return null \n\n    val start: Int \n    val isNegative: Boolean \n    val limit: Int \n    val
firstChar = this[0] \n    if (firstChar < '0') { // Possible leading sign \n        if (length == 1) return null // non-digit
(possible sign) only, no digits after \n\n        start = 1 \n\n        if (firstChar == '-') { \n            isNegative = true \n
limit = Int.MIN_VALUE \n        } else if (firstChar == '+') { \n            isNegative = false \n            limit = -
Int.MAX_VALUE \n        } else \n            return null \n    } else { \n        start = 0 \n        isNegative = false \n        limit
= -Int.MAX_VALUE \n    } \n\n    val limitForMaxRadix = (-Int.MAX_VALUE) / 36 \n    var limitBeforeMul =
limitForMaxRadix \n    var result = 0 \n    for (i in start until length) { \n        val digit = digitOf(this[i], radix) \n\n
if (digit < 0) return null \n        if (result < limitBeforeMul) { \n            if (limitBeforeMul == limitForMaxRadix) { \n

```





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@kotlin.internal.InlineOnly\n    public inline val Int.days get() = toDuration(DurationUnit.DAYS)\n\n    /**
Returns a [Duration] equal to this [Long] number of days. */\n    @kotlin.internal.InlineOnly\n    public inline
val Long.days get() = toDuration(DurationUnit.DAYS)\n\n    /**\n    * Returns a [Duration] equal to this
[Double] number of days.\n    *\n    * Depending on its magnitude, the value is rounded to an integer number
of nanoseconds or milliseconds.\n    *\n    * @throws IllegalArgumentException if this [Double] value is
`NaN`.\n    */\n    @kotlin.internal.InlineOnly\n    public inline val Double.days get() =
toDuration(DurationUnit.DAYS)\n\n    // deprecated static factory functions\n\n    /** Returns a [Duration]
representing the specified [value] number of nanoseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Int.nanoseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun nanoseconds(value: Int): Duration =
value.toDuration(DurationUnit.NANOSECONDS)\n\n    /** Returns a [Duration] representing the specified
[value] number of nanoseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Long.nanoseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun nanoseconds(value: Long): Duration =
value.toDuration(DurationUnit.NANOSECONDS)\n\n    /**\n    * Returns a [Duration] representing the
specified [value] number of nanoseconds.\n    *\n    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`.\n    */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Double.nanoseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.nanoseconds", "kotlin.time.Duration.Companion.nanoseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun nanoseconds(value: Double): Duration =
value.toDuration(DurationUnit.NANOSECONDS)\n\n    /** Returns a [Duration] representing the specified
[value] number of microseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Int.microseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.microseconds", "kotlin.time.Duration.Companion.microseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun microseconds(value: Int): Duration =
value.toDuration(DurationUnit.MICROSECONDS)\n\n    /** Returns a [Duration] representing the specified
[value] number of microseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Long.microseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.microseconds", "kotlin.time.Duration.Companion.microseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun microseconds(value: Long): Duration =
value.toDuration(DurationUnit.MICROSECONDS)\n\n    /**\n    * Returns a [Duration] representing the
specified [value] number of microseconds.\n    *\n    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`.\n    */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Double.microseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.microseconds", "kotlin.time.Duration.Companion.microseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun microseconds(value: Double): Duration =
value.toDuration(DurationUnit.MICROSECONDS)\n\n    /** Returns a [Duration] representing the specified
[value] number of milliseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Int.milliseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.milliseconds", "kotlin.time.Duration.Companion.milliseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun milliseconds(value: Int): Duration =
value.toDuration(DurationUnit.MILLISECONDS)\n\n    /** Returns a [Duration] representing the specified
[value] number of milliseconds. */\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Long.milliseconds' extension property from Duration.Companion
instead.", ReplaceWith("value.milliseconds", "kotlin.time.Duration.Companion.milliseconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun milliseconds(value: Long): Duration =

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value.toDuration(DurationUnit.MILLISECONDS)\n\n    /**\n    * Returns a [Duration] representing the
specified [value] number of milliseconds.\n    *\n    * @throws IllegalArgumentException if the provided
`Double` [value] is `NaN`.\n    *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Double.milliseconds' extension property from Duration.Companion instead.",
ReplaceWith("value.milliseconds", "kotlin.time.Duration.Companion.milliseconds"))\n
@DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun milliseconds(value: Double): Duration =
value.toDuration(DurationUnit.MILLISECONDS)\n\n\n    /** Returns a [Duration] representing the specified
[value] number of seconds. *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use
'Int.seconds' extension property from Duration.Companion instead.", ReplaceWith("value.seconds",
"kotlin.time.Duration.Companion.seconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public
fun seconds(value: Int): Duration = value.toDuration(DurationUnit.SECONDS)\n\n\n    /** Returns a [Duration]
representing the specified [value] number of seconds. *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n
    @Deprecated("Use 'Long.seconds' extension property from Duration.Companion instead.",
ReplaceWith("value.seconds", "kotlin.time.Duration.Companion.seconds"))\n
@DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun seconds(value: Long): Duration =
value.toDuration(DurationUnit.SECONDS)\n\n\n    /**\n    * Returns a [Duration] representing the specified
[value] number of seconds.\n    *\n    * @throws IllegalArgumentException if the provided `Double` [value] is
`NaN`.\n    *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use
'Double.seconds' extension property from Duration.Companion instead.", ReplaceWith("value.seconds",
"kotlin.time.Duration.Companion.seconds"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public
fun seconds(value: Double): Duration = value.toDuration(DurationUnit.SECONDS)\n\n\n    /** Returns a
[Duration] representing the specified [value] number of minutes. *\n    @SinceKotlin("1.5")\n
    @ExperimentalTime\n    @Deprecated("Use 'Int.minutes' extension property from Duration.Companion
instead.", ReplaceWith("value.minutes", "kotlin.time.Duration.Companion.minutes"))\n
@DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun minutes(value: Int): Duration =
value.toDuration(DurationUnit.MINUTES)\n\n\n    /** Returns a [Duration] representing the specified [value]
number of minutes. *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use
'Long.minutes' extension property from Duration.Companion instead.", ReplaceWith("value.minutes",
"kotlin.time.Duration.Companion.minutes"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public
fun minutes(value: Long): Duration = value.toDuration(DurationUnit.MINUTES)\n\n\n    /**\n    * Returns a
[Duration] representing the specified [value] number of minutes.\n    *\n    * @throws
IllegalArgumentException if the provided `Double` [value] is `NaN`.\n    *\n    @SinceKotlin("1.5")\n
    @ExperimentalTime\n    @Deprecated("Use 'Double.minutes' extension property from Duration.Companion
instead.", ReplaceWith("value.minutes", "kotlin.time.Duration.Companion.minutes"))\n
@DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun minutes(value: Double): Duration =
value.toDuration(DurationUnit.MINUTES)\n\n\n    /** Returns a [Duration] representing the specified [value]
number of hours. *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Int.hours'
extension property from Duration.Companion instead.", ReplaceWith("value.hours",
"kotlin.time.Duration.Companion.hours"))\n    @DeprecatedSinceKotlin(warningSince = "1.6")\n    public
fun hours(value: Int): Duration = value.toDuration(DurationUnit.HOURS)\n\n\n    /** Returns a [Duration]
representing the specified [value] number of hours. *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n
    @Deprecated("Use 'Long.hours' extension property from Duration.Companion instead.",
ReplaceWith("value.hours", "kotlin.time.Duration.Companion.hours"))\n
@DeprecatedSinceKotlin(warningSince = "1.6")\n    public fun hours(value: Long): Duration =
value.toDuration(DurationUnit.HOURS)\n\n\n    /**\n    * Returns a [Duration] representing the specified
[value] number of hours.\n    *\n    * @throws IllegalArgumentException if the provided `Double` [value] is
`NaN`.\n    *\n    @SinceKotlin("1.5")\n    @ExperimentalTime\n    @Deprecated("Use 'Double.hours'
extension property from Duration.Companion instead.", ReplaceWith("value.hours",

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\kotlin.time.Duration.Companion.hours\))\n    @DeprecatedSinceKotlin(warningSince = `1.6`)\n    public
fun hours(value: Double): Duration = value.toDuration(DurationUnit.HOURS)\n\n    /** Returns a [Duration]
representing the specified [value] number of days. */\n    @SinceKotlin(`1.5`)\n    @ExperimentalTime\n    @Deprecated(`Use 'Int.days' extension property from Duration.Companion instead.`,\n    ReplaceWith(`value.days``),\n\kotlin.time.Duration.Companion.days\))\n    @DeprecatedSinceKotlin(warningSince = `1.6`)\n    public
fun days(value: Int): Duration = value.toDuration(DurationUnit.DAYS)\n\n    /** Returns a [Duration]
representing the specified [value] number of days. */\n    @SinceKotlin(`1.5`)\n    @ExperimentalTime\n    @Deprecated(`Use 'Long.days' extension property from Duration.Companion instead.`,\n    ReplaceWith(`value.days`` , \kotlin.time.Duration.Companion.days\`))\n
    @DeprecatedSinceKotlin(warningSince = `1.6`)\n    public fun days(value: Long): Duration =
value.toDuration(DurationUnit.DAYS)\n\n    /**\n    * Returns a [Duration] representing the specified [value]
number of days.\n    * \n    * @throws IllegalArgumentException if the provided `Double` [value] is `NaN`.\n
    */\n    @SinceKotlin(`1.5`)\n    @ExperimentalTime\n    @Deprecated(`Use 'Double.days' extension
property from Duration.Companion instead.` , ReplaceWith(`value.days`` ,\n
\kotlin.time.Duration.Companion.days\`))\n    @DeprecatedSinceKotlin(warningSince = `1.6`)\n    public
fun days(value: Double): Duration = value.toDuration(DurationUnit.DAYS)\n\n    /**\n    * Parses a string that
represents a duration and returns the parsed [Duration] value.\n    * \n    * The following formats are
accepted:\n    * \n    * - ISO-8601 Duration format, e.g. `P1DT2H3M4.058S` , see [toIsoString] and
[parseIsoString].\n    * - The format of string returned by the default [Duration.toString] and `toString` in a
specific unit,\n    * e.g. `10s` , `1h 30m` or `-(1h 30m)` .\n    * \n    * @throws IllegalArgumentException if
the string doesn't represent a duration in any of the supported formats.\n    * \n    * @sample
samples.time.Durations.parse\n    */\n    public fun parse(value: String): Duration = try {\n
parseDuration(value, strictIso = false)\n    } catch (e: IllegalArgumentException) {\n    throw
IllegalArgumentException("Invalid duration string format: '$value'.", e)\n    }\n\n    /**\n    * Parses a
string that represents a duration in ISO-8601 format and returns the parsed [Duration] value.\n    * \n    *
@throws IllegalArgumentException if the string doesn't represent a duration in ISO-8601 format.\n    * \n    * @sample
samples.time.Durations.parseIsoString\n    */\n    public fun parseIsoString(value: String): Duration = try {\n
parseDuration(value, strictIso = true)\n    } catch (e: IllegalArgumentException) {\n    throw
IllegalArgumentException("Invalid ISO duration string format: '$value'.", e)\n    }\n\n    /**\n    * Parses a
string that represents a duration and returns the parsed [Duration] value,\n    * or `null` if the string doesn't
represent a duration in any of the supported formats.\n    * \n    * The following formats are accepted:\n
*\n    * - ISO-8601 Duration format, e.g. `P1DT2H3M4.058S` , see [toIsoString] and [parseIsoString].\n    * -
The format of string returned by the default [Duration.toString] and `toString` in a specific unit,\n    * e.g. `10s` ,
`1h 30m` or `-(1h 30m)` .\n    * \n    * @sample samples.time.Durations.parse\n    */\n    public fun
parseOrNull(value: String): Duration? = try {\n    parseDuration(value, strictIso = false)\n    } catch (e:
IllegalArgumentException) {\n    null\n    }\n\n    /**\n    * Parses a string that represents a duration in
ISO-8601 format and returns the parsed [Duration] value,\n    * or `null` if the string doesn't represent a duration
in ISO-8601 format.\n    * \n    * @sample samples.time.Durations.parseIsoString\n    */\n    public fun
parseIsoStringOrNull(value: String): Duration? = try {\n    parseDuration(value, strictIso = true)\n    } catch
(e: IllegalArgumentException) {\n    null\n    }\n    }\n\n    // arithmetic operators\n\n    /** Returns the
negative of this value. */\n    public operator fun unaryMinus(): Duration = durationOf(-value,\n    unitDiscriminator)\n\n    /**\n    * Returns a duration whose value is the sum of this and [other] duration values.\n
*\n    * @throws IllegalArgumentException if the operation results in an undefined value for the given arguments,\n
* e.g. when adding infinite durations of different sign.\n    */\n    public operator fun plus(other: Duration):
Duration {\n    when {\n    this.isInfinite() -> {\n    if (other.isFinite() || (this.rawValue xor
other.rawValue >= 0))\n    return this\n    else\n    throw
IllegalArgumentException("Summing infinite durations of different signs yields an undefined result.")\n    }\n
other.isInfinite() -> return other\n    }\n    return when {\n    this.unitDiscriminator ==

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other.unitDiscriminator -> {\n          val result = this.value + other.value // never overflows long, but can
overflow long63\n          when {\n          isInNanos() ->\n
durationOfNanosNormalized(result)\n          else ->\n          durationOfMillisNormalized(result)\n
}\n      }\n      this.isInMillis() ->\n          addValuesMixedRanges(this.value, other.value)\n
else ->\n          addValuesMixedRanges(other.value, this.value)\n      }\n      }\n      private fun
addValuesMixedRanges(thisMillis: Long, otherNanos: Long): Duration {\n      val otherMillis =
nanosToMillis(otherNanos)\n      val resultMillis = thisMillis + otherMillis\n      return if (resultMillis in -
MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n          val otherNanoRemainder = otherNanos -
millisToNanos(otherMillis)\n          durationOfNanos(millisToNanos(resultMillis) + otherNanoRemainder)\n      }
else {\n          durationOfMillis(resultMillis.coerceIn(-MAX_MILLIS, MAX_MILLIS))\n      }\n      }\n      /**\n
* Returns a duration whose value is the difference between this and [other] duration values.\n
* \n
* @throws
IllegalArgumentOutOfRangeException if the operation results in an undefined value for the given arguments,\n
* e.g. when
subtracting infinite durations of the same sign.\n
* \n
public operator fun minus(other: Duration): Duration =
this + (-other)\n
/**\n
* Returns a duration whose value is this duration value multiplied by the given [scale]
number.\n
* \n
* @throws
IllegalArgumentOutOfRangeException if the operation results in an undefined value for the given
arguments,\n
* e.g. when multiplying an infinite duration by zero.\n
* \n
public operator fun times(scale: Int):
Duration {\n      if (isInfinite()) {\n          return when {\n          scale == 0 -> throw
IllegalArgumentOutOfRangeException("Multiplying infinite duration by zero yields an undefined result.")\n
scale > 0
-> this\n          else -> -this\n          }\n      }\n      if (scale == 0) return ZERO\n      val value = value\n
val result = value * scale\n      return if (isInNanos()) {\n          if (value in (MAX_NANOS /
Int.MIN_VALUE)..(-MAX_NANOS / Int.MIN_VALUE)) {\n          // can't overflow nanos range for any
scale\n          durationOfNanos(result)\n          } else {\n          if (result / scale == value) {\n
durationOfNanosNormalized(result)\n          } else {\n          val millis = nanosToMillis(value)\n
val remNanos = value - millisToNanos(millis)\n          val resultMillis = millis * scale\n          val
totalMillis = resultMillis + nanosToMillis(remNanos * scale)\n          if (resultMillis / scale == millis &&
totalMillis xor resultMillis >= 0) {\n          durationOfMillis(totalMillis.coerceIn(-
MAX_MILLIS..MAX_MILLIS))\n          } else {\n          if (value.sign * scale.sign > 0) INFINITE
else NEG_INFINITE\n          }\n      }\n      }\n      } else {\n      if (result / scale == value) {\n
durationOfMillis(result.coerceIn(-MAX_MILLIS..MAX_MILLIS))\n      } else {\n      if (value.sign
* scale.sign > 0) INFINITE else NEG_INFINITE\n      }\n      }\n      }\n      /**\n
* Returns a duration whose
value is this duration value multiplied by the given [scale] number.\n
* \n
* The operation may involve rounding
when the result cannot be represented exactly with a [Double] number.\n
* \n
* @throws
IllegalArgumentOutOfRangeException if the operation results in an undefined value for the given arguments,\n
* e.g. when
multiplying an infinite duration by zero.\n
* \n
public operator fun times(scale: Double): Duration {\n      val
intScale = scale.roundToInt()\n      if (intScale.toDouble() == scale) {\n          return times(intScale)\n      }\n      }\n      val unit = storageUnit\n      val result = toDouble(unit) * scale\n      return result.toDuration(unit)\n      }\n      }\n      /**\n
* Returns a duration whose value is this duration value divided by the given [scale] number.\n
* \n
*
@throws
IllegalArgumentOutOfRangeException if the operation results in an undefined value for the given arguments,\n
*
e.g. when dividing zero duration by zero.\n
* \n
public operator fun div(scale: Int): Duration {\n      if (scale ==
0) {\n          return when {\n          isPositive() -> INFINITE\n          isNegative() -> NEG_INFINITE\n
else -> throw
IllegalArgumentOutOfRangeException("Dividing zero duration by zero yields an undefined result.")\n
}\n      }\n      if (isInNanos()) {\n          return durationOfNanos(value / scale)\n      } else {\n      if
(isInfinite())\n          return this * scale.sign\n          val result = value / scale\n          if (result in -
MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n          val rem = millisToNanos(value - (result *
scale)) / scale\n          return durationOfNanos(millisToNanos(result) + rem)\n          }\n          return
durationOfMillis(result)\n      }\n      }\n      }\n      /**\n
* Returns a duration whose value is this duration value divided
by the given [scale] number.\n
* \n
* @throws
IllegalArgumentOutOfRangeException if the operation results in an
undefined value for the given arguments,\n
* e.g. when dividing an infinite duration by infinity or zero duration

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by zero.\n    */\n    public operator fun div(scale: Double): Duration {\n        val intScale = scale.roundToInt()\n        if (intScale.toDouble() == scale && intScale != 0) {\n            return div(intScale)\n        }\n        val unit =\n        storageUnit\n        val result = toDouble(unit) / scale\n        return result.toDuration(unit)\n    }\n    /** Returns a\n    number that is the ratio of this and [other] duration values. */\n    public operator fun div(other: Duration): Double\n    {\n        val coarserUnit = maxOf(this.storageUnit, other.storageUnit)\n        return this.toDouble(coarserUnit) /\n        other.toDouble(coarserUnit)\n    }\n    /** Returns true, if the duration value is less than zero. */\n    public fun\n    isNegative(): Boolean = rawValue < 0\n    /** Returns true, if the duration value is greater than zero. */\n    public fun\n    isPositive(): Boolean = rawValue > 0\n    /** Returns true, if the duration value is infinite. */\n    public fun\n    isInfinite(): Boolean = rawValue == INFINITE.rawValue || rawValue == NEG_INFINITE.rawValue\n    /**\n    Returns true, if the duration value is finite. */\n    public fun isFinite(): Boolean = !isInfinite()\n    /** Returns the\n    absolute value of this value. The returned value is always non-negative. */\n    public val absoluteValue: Duration\n    get() = if (isNegative()) -this else this\n    override fun compareTo(other: Duration): Int {\n        val compareBits =\n        this.rawValue xor other.rawValue\n        if (compareBits < 0 || compareBits.toInt() and 1 == 0) // different signs or\n        same sign/same range\n            return this.rawValue.compareTo(other.rawValue) // same sign/different\n        ranges\n        val r = this.unitDiscriminator - other.unitDiscriminator // compare ranges\n        return if (isNegative())\n        -r else r\n    }\n    /**\n    * Splits this duration into days, hours, minutes,\n    seconds, and nanoseconds and executes the given [action] with these components.\n    * The result of [action] is\n    returned as the result of this function.\n    * - `nanoseconds` represents the whole number of nanoseconds in\n    this duration, and its absolute value is less than 1_000_000_000;\n    * - `seconds` represents the whole number of\n    seconds in this duration, and its absolute value is less than 60;\n    * - `minutes` represents the whole number of\n    minutes in this duration, and its absolute value is less than 60;\n    * - `hours` represents the whole number of hours\n    in this duration, and its absolute value is less than 24;\n    * - `days` represents the whole number of days in this\n    duration.\n    * - Infinite durations are represented as either [Long.MAX_VALUE] days, or\n    [Long.MIN_VALUE] days (depending on the sign of infinity),\n    * and zeroes in the lower components.\n    */\n    public inline fun <T> toComponents(action: (days: Long, hours: Int, minutes: Int, seconds: Int, nanoseconds: Int) -\n    > T): T {\n        contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE) }\n        return\n        action(inWholeDays, hoursComponent, minutesComponent, secondsComponent, nanosecondsComponent)\n    }\n    /**\n    * Splits this duration into hours, minutes, seconds, and nanoseconds and executes the given [action] with\n    these components.\n    * The result of [action] is returned as the result of this function.\n    * - `nanoseconds` represents the whole number of nanoseconds in this duration, and its absolute value is less than 1_000_000_000;\n    * - `seconds` represents the whole number of seconds in this duration, and its absolute value is less than 60;\n    * - `minutes` represents the whole number of minutes in this duration, and its absolute value is less than 60;\n    * - `hours` represents the whole number of hours in this duration.\n    * - Infinite durations are represented as\n    either [Long.MAX_VALUE] hours, or [Long.MIN_VALUE] hours (depending on the sign of infinity),\n    * and zeroes in the lower components.\n    */\n    public inline fun <T> toComponents(action: (hours: Long, minutes: Int,\n    seconds: Int, nanoseconds: Int) -> T): T {\n        contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE)\n        }\n        return action(inWholeHours, minutesComponent, secondsComponent, nanosecondsComponent)\n    }\n    /**\n    * Splits this duration into minutes, seconds, and nanoseconds and executes the given [action] with these\n    components.\n    * The result of [action] is returned as the result of this function.\n    * - `nanoseconds` represents the whole number of nanoseconds in this duration, and its absolute value is less than 1_000_000_000;\n    * - `seconds` represents the whole number of seconds in this duration, and its absolute value is less than 60;\n    * - `minutes` represents the whole number of minutes in this duration.\n    * - Infinite durations are represented as\n    either [Long.MAX_VALUE] minutes, or [Long.MIN_VALUE] minutes (depending on the sign of infinity),\n    * and zeroes in the lower components.\n    */\n    public inline fun <T> toComponents(action: (minutes: Long,\n    seconds: Int, nanoseconds: Int) -> T): T {\n        contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE)\n        }\n        return action(inWholeMinutes, secondsComponent, nanosecondsComponent)\n    }\n    /**\n    * Splits\n    this duration into seconds, and nanoseconds and executes the given [action] with these components.\n    * The result\n    of [action] is returned as the result of this function.\n    * - `nanoseconds` represents the whole number of

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nanoseconds in this duration, and its absolute value is less than 1_000_000_000;\n
 * - `seconds` represents the whole number of seconds in this duration.\n
 * Infinite durations are represented as either [Long.MAX_VALUE] seconds, or [Long.MIN_VALUE] seconds (depending on the sign of infinity),\n
 * and zero nanoseconds.\n
 * public inline fun <T> toComponents(action: (seconds: Long, nanoseconds: Int) -> T): T {\n
 *     contract { callsInPlace(action, InvocationKind.EXACTLY_ONCE) }\n
 *     return action(inWholeSeconds, nanosecondsComponent)\n
 * }\n
 * @PublishedApi\n
 * internal val hoursComponent: Int\n
 *     get() = if (isInfinite()) 0 else (inWholeHours % 24).toInt()\n
 * @PublishedApi\n
 * internal val minutesComponent: Int\n
 *     get() = if (isInfinite()) 0 else (inWholeMinutes % 60).toInt()\n
 * @PublishedApi\n
 * internal val secondsComponent: Int\n
 *     get() = if (isInfinite()) 0 else (inWholeSeconds % 60).toInt()\n
 * @PublishedApi\n
 * internal val nanosecondsComponent: Int\n
 *     get() = when {\n
 *         isInfinite() -> 0\n
 *         isInMillis() -> millisToNanos(value % 1_000).toInt()\n
 *         else -> (value % 1_000_000_000).toInt()\n
 *     }\n
 * }\n
 * // conversion to units\n
 * /**\n
 *  * Returns the value of this duration expressed as a [Double] number of the specified [unit].\n
 *  * The operation may involve rounding when the result cannot be represented exactly with a [Double] number.\n
 *  * An infinite duration value is converted either to [Double.POSITIVE_INFINITY] or [Double.NEGATIVE_INFINITY] depending on its sign.\n
 *  * public fun toDouble(unit: DurationUnit): Double {\n
 *     return when (rawValue) {\n
 *         INFINITE.rawValue -> Double.POSITIVE_INFINITY\n
 *         NEG_INFINITE.rawValue -> Double.NEGATIVE_INFINITY\n
 *         else -> {\n
 *             // TODO: whether it's ok to convert to Double before scaling\n
 *             convertDurationUnit(value.toDouble(), storageUnit, unit)\n
 *         }\n
 *     }\n
 * }\n
 * /**\n
 *  * Returns the value of this duration expressed as a [Long] number of the specified [unit].\n
 *  * If the result doesn't fit in the range of [Long] type, it is coerced into that range:\n
 *  * - [Long.MIN_VALUE] is returned if it's less than `Long.MIN_VALUE`,\n
 *  * - [Long.MAX_VALUE] is returned if it's greater than `Long.MAX_VALUE`.\n
 *  * An infinite duration value is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n
 *  * public fun toLong(unit: DurationUnit): Long {\n
 *     return when (rawValue) {\n
 *         INFINITE.rawValue -> Long.MAX_VALUE\n
 *         NEG_INFINITE.rawValue -> Long.MIN_VALUE\n
 *         else -> convertDurationUnit(value, storageUnit, unit)\n
 *     }\n
 * }\n
 * /**\n
 *  * Returns the value of this duration expressed as an [Int] number of the specified [unit].\n
 *  * If the result doesn't fit in the range of [Int] type, it is coerced into that range:\n
 *  * - [Int.MIN_VALUE] is returned if it's less than `Int.MIN_VALUE`,\n
 *  * - [Int.MAX_VALUE] is returned if it's greater than `Int.MAX_VALUE`.\n
 *  * An infinite duration value is converted either to [Int.MAX_VALUE] or [Int.MIN_VALUE] depending on its sign.\n
 *  * public fun toInt(unit: DurationUnit): Int =\n
 *     toLong(unit).coerceIn(Int.MIN_VALUE.toInt(), Int.MAX_VALUE.toInt())\n
 * /** The value of this duration expressed as a [Double] number of days.\n
 * @ExperimentalTime\n
 * @Deprecated("Use inWholeDays property instead or convert toDouble(DAYS) if a double value is required.", ReplaceWith("toDouble(DurationUnit.DAYS)"))\n
 * public val inDays: Double get() = toDouble(DurationUnit.DAYS)\n
 * /** The value of this duration expressed as a [Double] number of hours. @ExperimentalTime\n
 * @Deprecated("Use inWholeHours property instead or convert toDouble(HOURS) if a double value is required.", ReplaceWith("toDouble(DurationUnit.HOURS)"))\n
 * public val inHours: Double get() = toDouble(DurationUnit.HOURS)\n
 * /** The value of this duration expressed as a [Double] number of minutes. @ExperimentalTime\n
 * @Deprecated("Use inWholeMinutes property instead or convert toDouble(MINUTES) if a double value is required.", ReplaceWith("toDouble(DurationUnit.MINUTES)"))\n
 * public val inMinutes: Double get() = toDouble(DurationUnit.MINUTES)\n
 * /** The value of this duration expressed as a [Double] number of seconds. @ExperimentalTime\n
 * @Deprecated("Use inWholeSeconds property instead or convert toDouble(SECONDS) if a double value is required.", ReplaceWith("toDouble(DurationUnit.SECONDS)"))\n
 * public val inSeconds: Double get() = toDouble(DurationUnit.SECONDS)\n
 * /** The value of this duration expressed as a [Double] number of milliseconds. @ExperimentalTime\n
 * @Deprecated("Use inWholeMilliseconds property instead or convert toDouble(MILLISECONDS) if a double value is required.", ReplaceWith("toDouble(DurationUnit.MILLISECONDS)"))\n
 * public val inMilliseconds: Double get() =

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toDouble(DurationUnit.MILLISECONDS)\n\n /** The value of this duration expressed as a [Double] number of
microseconds. */\n @ExperimentalTime\n @Deprecated("Use inWholeMicroseconds property instead or
convert toDouble(MICROSECONDS) if a double value is required."),
ReplaceWith("toDouble(DurationUnit.MICROSECONDS)")\n public val inMicroseconds: Double get() =
toDouble(DurationUnit.MICROSECONDS)\n\n /** The value of this duration expressed as a [Double] number of
nanoseconds. */\n @ExperimentalTime\n @Deprecated("Use inWholeNanoseconds property instead or convert
toDouble(NANOSECONDS) if a double value is required."),
ReplaceWith("toDouble(DurationUnit.NANOSECONDS)")\n public val inNanoseconds: Double get() =
toDouble(DurationUnit.NANOSECONDS)\n\n\n /**\n * The value of this duration expressed as a [Long]
number of days.\n * \n * An infinite duration value is converted either to [Long.MAX_VALUE] or
[Long.MIN_VALUE] depending on its sign.\n */\n public val inWholeDays: Long\n get() =
toLong(DurationUnit.DAYS)\n\n\n /**\n * The value of this duration expressed as a [Long] number of hours.\n
*\n * An infinite duration value is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending
on its sign.\n */\n public val inWholeHours: Long\n get() = toLong(DurationUnit.HOURS)\n\n\n /**\n *
The value of this duration expressed as a [Long] number of minutes.\n * \n * An infinite duration value is
converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n */\n public val
inWholeMinutes: Long\n get() = toLong(DurationUnit.MINUTES)\n\n\n /**\n * The value of this duration
expressed as a [Long] number of seconds.\n * \n * An infinite duration value is converted either to
[Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n */\n public val inWholeSeconds:
Long\n get() = toLong(DurationUnit.SECONDS)\n\n\n /**\n * The value of this duration expressed as a
[Long] number of milliseconds.\n * \n * An infinite duration value is converted either to [Long.MAX_VALUE]
or [Long.MIN_VALUE] depending on its sign.\n */\n public val inWholeMilliseconds: Long\n get() {\n
return if (isInMillis() && isFinite()) value else toLong(DurationUnit.MILLISECONDS)\n } \n\n\n /**\n *
The value of this duration expressed as a [Long] number of microseconds.\n * \n * If the result doesn't fit in the
range of [Long] type, it is coerced into that range:\n * - [Long.MIN_VALUE] is returned if it's less than
`Long.MIN_VALUE`,\n * - [Long.MAX_VALUE] is returned if it's greater than `Long.MAX_VALUE`. \n * \n
* An infinite duration value is converted either to [Long.MAX_VALUE] or [Long.MIN_VALUE] depending on
its sign.\n */\n public val inWholeMicroseconds: Long\n get() =
toLong(DurationUnit.MICROSECONDS)\n\n\n /**\n * The value of this duration expressed as a [Long] number
of nanoseconds.\n * \n * If the result doesn't fit in the range of [Long] type, it is coerced into that range:\n
* - [Long.MIN_VALUE] is returned if it's less than `Long.MIN_VALUE`,\n * - [Long.MAX_VALUE] is returned if
it's greater than `Long.MAX_VALUE`. \n * \n * An infinite duration value is converted either to
[Long.MAX_VALUE] or [Long.MIN_VALUE] depending on its sign.\n */\n public val inWholeNanoseconds:
Long\n get() {\n val value = value\n return when {\n isInNanos() -> value\n
value > Long.MAX_VALUE / NANOS_IN_MILLIS -> Long.MAX_VALUE\n value <
Long.MIN_VALUE / NANOS_IN_MILLIS -> Long.MIN_VALUE\n else -> millisToNanos(value)\n
}\n }\n\n // shortcuts\n\n\n /**\n * Returns the value of this duration expressed as a [Long] number of
nanoseconds.\n * \n * If the value doesn't fit in the range of [Long] type, it is coerced into that range, see the
conversion [Double.toLong] for details.\n * \n * The range of durations that can be expressed as a `Long`
number of nanoseconds is approximately \u00b1292 years.\n */\n @ExperimentalTime\n @Deprecated("Use
inWholeNanoseconds property instead.", ReplaceWith("this.inWholeNanoseconds"))\n public fun
toLongNanoseconds(): Long = inWholeNanoseconds\n\n\n /**\n * Returns the value of this duration expressed as
a [Long] number of milliseconds.\n * \n * The value is coerced to the range of [Long] type, if it doesn't fit in
that range, see the conversion [Double.toLong] for details.\n * \n * The range of durations that can be expressed
as a `Long` number of milliseconds is approximately \u00b1292 million years.\n */\n @ExperimentalTime\n
@Deprecated("Use inWholeMilliseconds property instead.", ReplaceWith("this.inWholeMilliseconds"))\n
public fun toLongMilliseconds(): Long = inWholeMilliseconds\n\n\n /**\n * Returns a string representation of
this duration value\n * expressed as a combination of numeric components, each in its own unit.\n * \n * Each

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*/\n public fun toIsoString(): String = buildString {\n     if (isNegative()) append('-')\n     append('\PT')\n this@Duration.absoluteValue.toComponents { hours, minutes, seconds, nanoseconds ->\n @Suppress("NAME_SHADOWING")\n     var hours = hours\n     if (isInfinite()) {\n         // use large\n         enough value instead of Long.MAX_VALUE\n         hours = 9_999_999_999_999\n     }\n     val\n hasHours = hours != 0L\n     val hasSeconds = seconds != 0 || nanoseconds != 0\n     val hasMinutes =\n minutes != 0 || (hasSeconds && hasHours)\n     if (hasHours) {\n         append(hours).append('H')\n }\n     if (hasMinutes) {\n         append(minutes).append('M')\n     }\n     if (hasSeconds ||\n (!hasHours && !hasMinutes)) {\n         appendFractional(seconds, nanoseconds, 9, 'S', isoZeroes = true)\n }\n }\n }\n }\n\n// constructing from number of units\n// extension functions\n\n/** Returns a [Duration]\n equal to this [Int] number of the specified [unit].\n\n*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic fun Int.toDuration(unit:\n DurationUnit): Duration {\n     return if (unit <= DurationUnit.SECONDS) {\n durationOfNanos(convertDurationUnitOverflow(this.toLong(), unit, DurationUnit.NANOSECONDS))\n     } else {\n     toLong().toDuration(unit)\n }\n\n/** Returns a [Duration] equal to this [Long] number of the specified [unit].\n\n*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic fun Long.toDuration(unit:\n DurationUnit): Duration {\n     val maxNsInUnit = convertDurationUnitOverflow(MAX_NANOS,\n DurationUnit.NANOSECONDS, unit)\n     if (this in -maxNsInUnit..maxNsInUnit) {\n         return\n durationOfNanos(convertDurationUnitOverflow(this, unit, DurationUnit.NANOSECONDS))\n     } else {\n         val\n millis = convertDurationUnit(this, unit, DurationUnit.MILLISECONDS)\n         return\n durationOfMillis(millis.coerceIn(-MAX_MILLIS, MAX_MILLIS))\n     }\n }\n\n/**\n * Returns a [Duration] equal\n to this [Double] number of the specified [unit].\n * Depending on its magnitude, the value is rounded to an\n integer number of nanoseconds or milliseconds.\n * @throws IllegalArgumentException if this `Double` value is\n `NaN`.\n\n*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic fun\n Double.toDuration(unit: DurationUnit): Duration {\n     val valueInNs = convertDurationUnit(this, unit,\n DurationUnit.NANOSECONDS)\n     require(!valueInNs.isNaN()) { "Duration value cannot be NaN." }\n     val\n nanos = valueInNs.roundToLong()\n     return if (nanos in -MAX_NANOS..MAX_NANOS) {\n durationOfNanos(nanos)\n     } else {\n         val millis = convertDurationUnit(this, unit,\n DurationUnit.MILLISECONDS).roundToLong()\n         durationOfMillisNormalized(millis)\n     }\n }\n\n//\n constructing from number of units\n// deprecated extension properties\n\n/** Returns a [Duration] equal to this [Int]\n number of nanoseconds.\n\n*/\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use 'Int.nanoseconds'\n extension property from Duration.Companion instead.", ReplaceWith("this.nanoseconds",\n "\kotlin.time.Duration.Companion.nanoseconds"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic val\n Int.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n/** Returns a [Duration] equal to this\n [Long] number of nanoseconds.\n\n*/\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use\n 'Long.nanoseconds' extension property from Duration.Companion instead.", ReplaceWith("this.nanoseconds",\n "\kotlin.time.Duration.Companion.nanoseconds"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic val\n Long.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n/**\n * Returns a [Duration] equal to this\n [Double] number of nanoseconds.\n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n\n*/\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use 'Double.nanoseconds' extension property\n from Duration.Companion instead.", ReplaceWith("this.nanoseconds",\n "\kotlin.time.Duration.Companion.nanoseconds"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic val\n Double.nanoseconds get() = toDuration(DurationUnit.NANOSECONDS)\n\n/** Returns a [Duration] equal to\n this [Int] number of microseconds.\n\n*/\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use\n 'Int.microseconds' extension property from Duration.Companion instead.", ReplaceWith("this.microseconds",\n "\kotlin.time.Duration.Companion.microseconds"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic val\n Int.microseconds get() = toDuration(DurationUnit.MICROSECONDS)\n\n/** Returns a [Duration] equal to this\n [Long] number of microseconds.\n\n*/\n@SinceKotlin("1.3")\n@ExperimentalTime\n@Deprecated("Use\n 'Long.microseconds' extension property from Duration.Companion instead.", ReplaceWith("this.microseconds",

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\"kotlin.time.Duration.Companion.microseconds\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.microseconds get() = toDuration(DurationUnit.MICROSECONDS)\n\n/**\n * Returns a [Duration] equal to
this [Double] number of microseconds.\n * \n * @throws IllegalArgumentException if this [Double] value is
`NaN`.\n * \n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.microseconds' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.microseconds\",
\"kotlin.time.Duration.Companion.microseconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.microseconds get() = toDuration(DurationUnit.MICROSECONDS)\n\n/**\n * Returns a [Duration] equal to
this [Int] number of milliseconds. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Int.milliseconds' extension property from Duration.Companion instead.\", ReplaceWith(\"this.milliseconds\",
\"kotlin.time.Duration.Companion.milliseconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Int.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)\n\n/**\n * Returns a [Duration] equal to this
[Long] number of milliseconds. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use
'Long.milliseconds' extension property from Duration.Companion instead.\", ReplaceWith(\"this.milliseconds\",
\"kotlin.time.Duration.Companion.milliseconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)\n\n/**\n * Returns a [Duration] equal to this
[Double] number of milliseconds.\n * \n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.milliseconds' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.milliseconds\",
\"kotlin.time.Duration.Companion.milliseconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.milliseconds get() = toDuration(DurationUnit.MILLISECONDS)\n\n/**\n * Returns a [Duration] equal to this
[Int] number of seconds. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Int.seconds'
extension property from Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Int.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/**\n * Returns a [Duration] equal to this [Long] number of
seconds. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Long.seconds' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/**\n * Returns a [Duration] equal to this [Double]
number of seconds.\n * \n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.seconds' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.seconds\",
\"kotlin.time.Duration.Companion.seconds\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.seconds get() = toDuration(DurationUnit.SECONDS)\n\n/**\n * Returns a [Duration] equal to this [Int]
number of minutes. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Int.minutes'
extension property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Int.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/**\n * Returns a [Duration] equal to this [Long] number of
minutes. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Long.minutes' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/**\n * Returns a [Duration] equal to this [Double]
number of minutes.\n * \n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Double.minutes' extension
property from Duration.Companion instead.\", ReplaceWith(\"this.minutes\",
\"kotlin.time.Duration.Companion.minutes\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.minutes get() = toDuration(DurationUnit.MINUTES)\n\n/**\n * Returns a [Duration] equal to this [Int]
number of hours. *\n * \n * @SinceKotlin(\"1.3\")\n * @ExperimentalTime\n * @Deprecated(\"Use 'Int.hours'
extension property from Duration.Companion instead.\", ReplaceWith(\"this.hours\",

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\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Int.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to this [Long] number of
hours. *\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Long.hours' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.hours\"),
\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to this [Double]
number of hours.\n *\n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Double.hours' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.hours\"),
\"kotlin.time.Duration.Companion.hours\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.hours get() = toDuration(DurationUnit.HOURS)\n\n/** Returns a [Duration] equal to this [Int] number of
days. *\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Int.days' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val Int.days
get() = toDuration(DurationUnit.DAYS)\n\n/** Returns a [Duration] equal to this [Long] number of days.
*\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Long.days' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Long.days get() = toDuration(DurationUnit.DAYS)\n\n/** Returns a [Duration] equal to this [Double] number
of days.\n *\n * @throws IllegalArgumentException if this [Double] value is `NaN`.\n
*\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\n@Deprecated(\"Use 'Double.days' extension property from
Duration.Companion instead.\", ReplaceWith(\"this.days\"),
\"kotlin.time.Duration.Companion.days\")\n@DeprecatedSinceKotlin(warningSince = \"1.5\")\npublic val
Double.days get() = toDuration(DurationUnit.DAYS)\n\n/** Returns a duration whose value is the specified
[duration] value multiplied by this number.
*\n@SinceKotlin(\"1.6\")\n@WasExperimental(ExperimentalTime::class)\n@kotlin.internal.InlineOnly\npublic
inline operator fun Int.times(duration: Duration): Duration = duration * this\n\n/** Returns a duration whose
value is the specified [duration] value multiplied by this number.\n *\n * The operation may involve rounding when
the result cannot be represented exactly with a [Double] number.\n *\n * @throws IllegalArgumentException if the
operation results in a `NaN` value.\n
*\n@SinceKotlin(\"1.6\")\n@WasExperimental(ExperimentalTime::class)\n@kotlin.internal.InlineOnly\npublic
inline operator fun Double.times(duration: Duration): Duration = duration * this\n\n\nprivate fun
parseDuration(value: String, strictIso: Boolean): Duration {\n    var length = value.length\n    if (length == 0) throw
IllegalArgumentException(\"The string is empty\")\n    var index = 0\n    var result = Duration.ZERO\n    val
infinityString = \"Infinity\"\n    when (value[index]) {\n        '+', '-' -> index++\n    }\n    val hasSign = index > 0\n    val
isNegative = hasSign && value.startsWith('-')\n    when {\n        length <= index ->\n            throw
IllegalArgumentException(\"No components\")\n        value[index] == 'P' -> {\n            if (++index == length) throw
IllegalArgumentException()\n            val nonDigitSymbols = \"+.\\\" var isTimeComponent = false\n            var prevUnit: DurationUnit? = null\n            while (index < length) {\n                if (value[index] == 'T') {\n                    if (isTimeComponent || ++index == length) throw
IllegalArgumentException()\n                    isTimeComponent =
true\n                    continue\n                }\n                val component = value.substringWhile(index) { it in '0'..'9' || it in
nonDigitSymbols }\n                if (component.isEmpty()) throw IllegalArgumentException()\n                index +=
component.length\n                val unitChar = value.getOrElse(index) { throw
IllegalArgumentException(\"Missing unit for value $component\") }\n                index++\n                val unit = durationUnitByIsoChar(unitChar,
isTimeComponent)\n                if (prevUnit != null && prevUnit <= unit) throw
IllegalArgumentException(\"Unexpected order of duration components\")\n                prevUnit = unit\n                val
dotIndex = component.indexOf('.')\n                if (unit == DurationUnit.SECONDS && dotIndex > 0) {\n                    val whole = component.substring(0, dotIndex)\n                    result +=

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parseOverLongIsoComponent(whole).toDuration(unit)\n          result +=
component.substring(dotIndex).toDouble().toDuration(unit)\n        } else {\n          result +=
parseOverLongIsoComponent(component).toDuration(unit)\n        }\n    }\n    strictIso ->\n    throw IllegalArgumentException()\n    value.regionMatches(index, infinityString, 0, length = maxOf(length -
index, infinityString.length), ignoreCase = true) -> {\n        result = Duration.INFINITE\n    }\n    else -> {\n
    // parse default string format\n        var prevUnit: DurationUnit? = null\n        var afterFirst = false\n
var allowSpaces = !hasSign\n        if (hasSign && value[index] == '(' && value.last() == ')') {\n
allowSpaces = true\n            if (++index == --length) throw IllegalArgumentException("No components")\n
    }\n        while (index < length) {\n            if (afterFirst && allowSpaces) {\n                index =
value.skipWhile(index) { it == ' ' }\n            }\n            afterFirst = true\n            val component =
value.substringWhile(index) { it in '0'..'9' || it == '.' }\n            if (component.isEmpty()) throw
IllegalArgumentException()\n                index += component.length\n                val unitName =
value.substringWhile(index) { it in 'a'..'z' }\n                index += unitName.length\n                val unit =
durationUnitByShortName(unitName)\n                if (prevUnit != null && prevUnit <= unit) throw
IllegalArgumentException("Unexpected order of duration components")\n                    prevUnit = unit\n                    val
dotIndex = component.indexOf('.')\n                    if (dotIndex > 0) {\n                        val whole = component.substring(0,
dotIndex)\n                        result += whole.toLong().toDuration(unit)\n                        result +=
component.substring(dotIndex).toDouble().toDuration(unit)\n                            if (index < length) throw
IllegalArgumentException("Fractional component must be last")\n                                } else {\n                                    result +=
component.toLong().toDuration(unit)\n                                }\n                            }\n                            }\n                            }\n                            return if (isNegative) -result else
result\n    }\n}\n\nprivate fun parseOverLongIsoComponent(value: String): Long {\n    val length = value.length\n    var
startIndex = 0\n    if (length > 0 && value[0] in "+-") startIndex++\n    if ((length - startIndex) > 16 &&
(startIndex..value.lastIndex).all { value[it] in '0'..'9' }) {\n        // all chars are digits, but more than
ceiling(log10(MAX_MILLIS / 1000)) of them\n        return if (value[0] == '-') Long.MIN_VALUE else
Long.MAX_VALUE\n    }\n    // TODO: replace with just toLong after min JDK becomes 8\n    return if
(value.startsWith("+")) value.drop(1).toLong() else value.toLong()\n}\n}\n\nprivate inline fun
String.substringWhile(startIndex: Int, predicate: (Char) -> Boolean): String =\n    substring(startIndex,
skipWhile(startIndex, predicate))\n\nprivate inline fun String.skipWhile(startIndex: Int, predicate: (Char) ->
Boolean): Int {\n    var i = startIndex\n    while (i < length && predicate(this[i])) i++\n    return i\n}\n}\n}\n}\n}\n\n//
The ranges are chosen so that they are:\n// - symmetric relative to zero: this greatly simplifies operations with sign,
e.g. unaryMinus and minus.\n// - non-overlapping, but adjacent: the first value that doesn't fit in nanos range, can be
exactly represented in millis.\n\ninternal const val NANOS_IN_MILLIS = 1_000_000\n// maximum number
duration can store in nanosecond range\n\ninternal const val MAX_NANOS = Long.MAX_VALUE / 2 /
NANOS_IN_MILLIS * NANOS_IN_MILLIS - 1 // ends in ...999_999\n// maximum number duration can store in
millisecond range, also encodes an infinite value\n\ninternal const val MAX_MILLIS = Long.MAX_VALUE / 2\n//
MAX_NANOS expressed in milliseconds\n\nprivate const val MAX_NANOS_IN_MILLIS = MAX_NANOS /
NANOS_IN_MILLIS\n\nprivate fun nanosToMillis(nanos: Long): Long = nanos / NANOS_IN_MILLIS\n\nprivate
fun millisToNanos(millis: Long): Long = millis * NANOS_IN_MILLIS\n\nprivate fun
durationOfNanos(normalNanos: Long) = Duration(normalNanos shl 1)\n\nprivate fun durationOfMillis(normalMillis:
Long) = Duration((normalMillis shl 1) + 1)\n\nprivate fun durationOf(normalValue: Long, unitDiscriminator: Int) =
Duration((normalValue shl 1) + unitDiscriminator)\n\nprivate fun durationOfNanosNormalized(nanos: Long) =\n    if
(nanos in -MAX_NANOS..MAX_NANOS) {\n        durationOfNanos(nanos)\n    } else {\n
durationOfMillis(nanosToMillis(nanos))\n    }\n\nprivate fun durationOfMillisNormalized(millis: Long) =\n    if
(millis in -MAX_NANOS_IN_MILLIS..MAX_NANOS_IN_MILLIS) {\n
durationOfNanos(millisToNanos(millis))\n    } else {\n        durationOfMillis(millis.coerceIn(-MAX_MILLIS,
MAX_MILLIS))\n    }\n}\n}\n\ninternal expect val durationAssertionsEnabled: Boolean\n\ninternal expect fun
formatToExactDecimals(value: Double, decimals: Int): String\n\ninternal expect fun formatUpToDecimals(value:
Double, decimals: Int): String", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language

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contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n@file:kotlin.jvm.JvmName("UnsignedKt")\npackage
kotlin\n\n@PublishedApi\ninternal fun uintCompare(v1: Int, v2: Int): Int = (v1 xor
Int.MIN_VALUE).compareTo(v2 xor Int.MIN_VALUE)\n@PublishedApi\ninternal fun ulongCompare(v1: Long,
v2: Long): Int = (v1 xor Long.MIN_VALUE).compareTo(v2 xor Long.MIN_VALUE)\n\n@PublishedApi\ninternal
fun uintDivide(v1: UInt, v2: UInt): UInt = (v1.toLong() / v2.toLong()).toUInt()\n@PublishedApi\ninternal fun
uintRemainder(v1: UInt, v2: UInt): UInt = (v1.toLong() % v2.toLong()).toUInt()\n\n// Division and remainder are
based on Guava's UnsignedLongs implementation\n// Copyright 2011 The Guava
Authors\n\n@PublishedApi\ninternal fun ulongDivide(v1: ULong, v2: ULong): ULong {\n    val dividend =
v1.toLong()\n    val divisor = v2.toLong()\n    if (divisor < 0) { // i.e., divisor >= 2^63\n        return if (v1 < v2)
ULong(0) else ULong(1)\n    }\n    // Optimization - use signed division if both dividend and divisor < 2^63\n    if
(dividend >= 0) {\n        return ULong(dividend / divisor)\n    }\n    // Otherwise, approximate the quotient, check,
and correct if necessary.\n    val quotient = ((dividend ushr 1) / divisor) shl 1\n    val rem = dividend - quotient *
divisor\n    return ULong(quotient + if (ULong(rem) >= ULong(divisor)) 1 else 0)\n}\n\n@PublishedApi\ninternal
fun ulongRemainder(v1: ULong, v2: ULong): ULong {\n    val dividend = v1.toLong()\n    val divisor =
v2.toLong()\n    if (divisor < 0) { // i.e., divisor >= 2^63\n        return if (v1 < v2) {\n            v1 // dividend <
divisor\n        } else {\n            v1 - v2 // dividend >= divisor\n        }\n    }\n    // Optimization - use signed
modulus if both dividend and divisor < 2^63\n    if (dividend >= 0) {\n        return ULong(dividend % divisor)\n    }\n    // Otherwise, approximate the quotient, check, and correct if necessary.\n    val quotient = ((dividend ushr 1)
/ divisor) shl 1\n    val rem = dividend - quotient * divisor\n    return ULong(rem - if (ULong(rem) >=
ULong(divisor)) divisor else 0)\n}\n\n@PublishedApi\ninternal fun doubleToUInt(v: Double): UInt = when {\n
v.isNaN() -> 0u\n v <= UInt.MIN_VALUE.toDouble() -> UInt.MIN_VALUE\n v >=
UInt.MAX_VALUE.toDouble() -> UInt.MAX_VALUE\n v <= Int.MAX_VALUE -> v.toInt().toUInt()\n else -
> (v - Int.MAX_VALUE).toInt().toUInt() + Int.MAX_VALUE.toUInt() // Int.MAX_VALUE < v <
UInt.MAX_VALUE\n}\n\n@PublishedApi\ninternal fun doubleToULong(v: Double): ULong = when {\n
v.isNaN() -> 0u\n v <= ULong.MIN_VALUE.toDouble() -> ULong.MIN_VALUE\n v >=
ULong.MAX_VALUE.toDouble() -> ULong.MAX_VALUE\n v < Long.MAX_VALUE ->
v.toLong().toULong()\n\n // Real values from Long.MAX_VALUE to (Long.MAX_VALUE + 1) are not
representable in Double, so don't handle them.\n else -> (v - 9223372036854775808.0).toLong().toULong() +
9223372036854775808uL // Long.MAX_VALUE + 1 < v <
ULong.MAX_VALUE\n}\n\n@PublishedApi\ninternal fun uintToDouble(v: Int): Double = (v and
Int.MAX_VALUE).toDouble() + (v ushr 31 shl 30).toDouble() * 2\n\n@PublishedApi\ninternal fun
ulongToDouble(v: Long): Double = (v ushr 11).toDouble() * 2048 + (v and 2047)\n\n\ninternal fun
ulongToString(v: Long): String = ulongToString(v, 10)\n\ninternal fun ulongToString(v: Long, base: Int): String {\n
if (v >= 0) return v.toString(base)\n\n    var quotient = ((v ushr 1) / base) shl 1\n    var rem = v - quotient * base\n
if (rem >= base) {\n        rem -= base\n        quotient += 1\n    }\n    return quotient.toString(base) +
rem.toString(base)\n}\n\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*/\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("CollectionsKt")\npackage
kotlin.collections\n\n/**\n * Given an [iterator] function constructs an [Iterable] instance that returns values through
the [Iterator]\n * provided by that function.\n * @sample samples.collections.Iterables.Building.iterable\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable(crossinline iterator: () -> Iterator<T>): Iterable<T>
= object : Iterable<T> {\n    override fun iterator(): Iterator<T> = iterator()\n}\n\n/**\n * A wrapper over another
[Iterable] (or any other object that can produce an [Iterator]) that returns\n * an indexing iterator.\n */\ninternal class
IndexingIterable<out T>(private val iteratorFactory: () -> Iterator<T>) : Iterable<IndexedValue<T>> {\n    override
fun iterator(): Iterator<IndexedValue<T>> = IndexingIterator(iteratorFactory())\n}\n\n\n/**\n * Returns the size of
this iterable if it is known, or `null` otherwise.\n */\n@PublishedApi\ninternal fun <T>

```



second values of each pair from this sequence.

`* The operation is _terminal_.`

`@sample`

```

samples.collections.Sequences.Transformations.unzip
public fun <T, R> Sequence<Pair<T, R>>.unzip():
Pair<List<T>, List<R>> {
    val listT = ArrayList<T>()
    val listR = ArrayList<R>()
    for (pair in this) {
        listT.add(pair.first)
        listR.add(pair.second)
    }
    return listT to listR
}

```

`* Returns a sequence that yields elements of this sequence randomly shuffled.`

`* Note that every iteration of the sequence returns elements in a different order.`

`* The operation is _intermediate_ and _stateful_.`

`* Since Kotlin("1.4")`

```

public fun <T> Sequence<T>.shuffled(): Sequence<T> = shuffled(Random)

```

`* Returns a sequence that yields elements of this sequence randomly shuffled`

`* using the specified [random] instance as the source of randomness.`

`* Note that every iteration of the sequence returns elements in a different order.`

`* The operation is _intermediate_ and _stateful_.`

`* Since Kotlin("1.4")`

```

public fun <T> Sequence<T>.shuffled(random: Random): Sequence<T> = sequence<T> {
    val buffer = toMutableList()
    while (buffer.isNotEmpty()) {
        val j = random.nextInt(buffer.size)
        val last = buffer.removeLast()
        val value = if (j < buffer.size) buffer.set(j, last) else last
        yield(value)
    }
}

```

`* A sequence that returns the values from the underlying [sequence] that either match or do not match`

`* the specified [predicate].`

`* @param sendWhen If `true`, values for which the predicate returns `true` are returned. Otherwise, values for which the predicate returns `false` are returned`

`* internal class FilteringSequence<T>`

```

private val sequence: Sequence<T>,
private val sendWhen: Boolean = true,
private val predicate: (T) -> Boolean
): Sequence<T> {
    override fun iterator(): Iterator<T> = object : Iterator<T> {
        val iterator = sequence.iterator()
        var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue
        var nextItem: T? = null
        private fun calcNext() {
            while (iterator.hasNext()) {
                val item = iterator.next()
                if (predicate(item) == sendWhen) {
                    nextItem = item
                    nextState = 1
                }
            }
            nextState = 0
        }
        override fun next(): T {
            if (nextState == -1) calcNext()
            if (nextState == 0) throw NoSuchElementException()
            val result = nextItem
            nextItem = null
            nextState = -1
            @SuppressWarnings("UNCHECKED_CAST")
            return result as T
        }
        override fun hasNext(): Boolean {
            if (nextState == -1) calcNext()
            return nextState == 1
        }
    }
}

```

`* A sequence which returns the results of applying the given [transformer] function to the values`

`* in the underlying [sequence].`

`* internal class TransformingSequence<T, R>`

```

constructor(private val sequence: Sequence<T>, private val transformer: (T) -> R) :
Sequence<R> {
    override fun iterator(): Iterator<R> = object : Iterator<R> {
        val iterator = sequence.iterator()
        override fun next(): R {
            return transformer(iterator.next())
        }
        override fun hasNext(): Boolean {
            return iterator.hasNext()
        }
        internal fun <E> flatten(iterator: (R) -> Iterator<E>): Sequence<E> {
            return FlatteningSequence<T, R, E>(sequence, transformer, iterator)
        }
    }
}

```

`* A sequence which returns the results of applying the given [transformer] function to the values`

`* in the underlying [sequence], where the transformer function takes the index of the value in the underlying`

`* sequence along with the value itself.`

`* internal class TransformingIndexedSequence<T, R>`

```

constructor(private val sequence: Sequence<T>, private val transformer: (Int, T) -> R) : Sequence<R> {
    override fun iterator(): Iterator<R> = object : Iterator<R> {
        val iterator = sequence.iterator()
        var index = 0
        override fun next(): R {
            return transformer(checkIndexOverflow(index++), iterator.next())
        }
        override fun hasNext(): Boolean {
            return iterator.hasNext()
        }
    }
}

```

`* A sequence which combines values from the underlying [sequence] with their indices and returns them as`

`* [IndexedValue] objects.`

`* internal class IndexingSequence<T>`

```

constructor(private val sequence: Sequence<T>) : Sequence<IndexedValue<T>> {
    override fun iterator(): Iterator<IndexedValue<T>> = object : Iterator<IndexedValue<T>> {
        val iterator = sequence.iterator()
        var index = 0
        override fun next(): IndexedValue<T> {
            return IndexedValue(checkIndexOverflow(index++), iterator.next())
        }
        override fun hasNext(): Boolean {
            return iterator.hasNext()
        }
    }
}

```

`* A sequence which takes the values from two parallel underlying sequences, passes them to the given`

`* [transform] function and returns the values returned by that function. The sequence stops returning`

`* values as soon as one of the underlying sequences stops returning values.`

`* internal class MergingSequence<T1, T2, V>`

```

constructor(

```



```

= null\n\n    private fun calcNext() {\n        if (iterator.hasNext()) {\n            val item = iterator.next()\n            if (predicate(item)) {\n                nextState = 1\n                nextItem = item\n                return\n            }\n            nextState = 0\n        }\n        override fun next(): T {\n            if (nextState == -1)\n                calcNext() // will change nextState\n                if (nextState == 0)\n                    throw NoSuchElementException()\n                @Suppress("UNCHECKED_CAST")\n                val result = nextItem as T\n                // Clean next to avoid keeping\n                reference on yielded instance\n                nextItem = null\n                nextState = -1\n                return result\n            }\n        }\n        override fun hasNext(): Boolean {\n            if (nextState == -1)\n                calcNext() // will change nextState\n            return nextState == 1\n        }\n    }\n}\n\n/**\n * A sequence that skips the specified number of values from the\n underlying [sequence] and returns\n * all values after that.\n */\ninternal class DropSequence<T>(\n    private val\n sequence: Sequence<T>,\n    private val count: Int\n) : Sequence<T>, DropTakeSequence<T> {\n    init {\n        require(count >= 0) { \"count must be non-negative, but was $count.\" }\n    }\n    override fun drop(n: Int):\n Sequence<T> = (count + n).let { n1 -> if (n1 < 0) DropSequence(this, n) else DropSequence(sequence, n1) }\n    override fun take(n: Int): Sequence<T> = (count + n).let { n1 -> if (n1 < 0) TakeSequence(this, n) else\n SubSequence(sequence, count, n1) }\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val\n iterator = sequence.iterator()\n        var left = count\n        // Shouldn't be called from constructor to avoid\n        premature iteration\n        private fun drop() {\n            while (left > 0 && iterator.hasNext()) {\n                iterator.next()\n                left--\n            }\n        }\n        override fun next(): T {\n            drop()\n            return\n            iterator.next()\n        }\n        override fun hasNext(): Boolean {\n            drop()\n            return iterator.hasNext()\n        }\n    }\n}\n\n/**\n * A sequence that skips the values from the underlying [sequence] while the given\n [predicate] returns `true` and returns\n * all values after that.\n */\ninternal class\n DropWhileSequence<T>(\n    constructor(\n        private val sequence: Sequence<T>,\n        private val predicate: (T) ->\n Boolean\n) : Sequence<T> {\n    override fun iterator(): Iterator<T> = object : Iterator<T> {\n        val iterator =\n sequence.iterator()\n        var dropState: Int = -1 // -1 for not dropping, 1 for nextItem, 0 for normal iteration\n        var nextItem: T? = null\n        private fun drop() {\n            while (iterator.hasNext()) {\n                val item =\n iterator.next()\n                if (!predicate(item)) {\n                    nextItem = item\n                    dropState = 1\n                }\n                return\n            }\n            dropState = 0\n        }\n        override fun next(): T {\n            if\n (dropState == -1)\n                drop()\n            if (dropState == 1) {\n                @Suppress("UNCHECKED_CAST")\n                val result = nextItem as T\n                nextItem = null\n                dropState = 0\n                return result\n            }\n            return iterator.next()\n        }\n        override fun\n hasNext(): Boolean {\n            if (dropState == -1)\n                drop()\n            return dropState == 1 ||\n iterator.hasNext()\n        }\n    }\n}\n\ninternal class DistinctSequence<T, K>(\n    private val source: Sequence<T>,\n    private val keySelector: (T) -> K\n) : Sequence<T> {\n    override fun iterator(): Iterator<T> =\n DistinctIterator(source.iterator(), keySelector)\n}\n\nprivate class DistinctIterator<T, K>(\n    private val source:\n Iterator<T>,\n    private val keySelector: (T) -> K\n) : AbstractIterator<T>() {\n    private val observed =\n HashSet<K>()\n    override fun computeNext() {\n        while (source.hasNext()) {\n            val next =\n source.next()\n            val key = keySelector(next)\n            if (observed.add(key)) {\n                setNext(next)\n                return\n            }\n            done()\n        }\n    }\n}\n\nprivate class GeneratorSequence<T : Any>(\n    private val\n getInitialValue: () -> T?,\n    private val getNextValue: (T) -> T?\n) : Sequence<T> {\n    override fun iterator():\n Iterator<T> = object : Iterator<T> {\n        var nextItem: T? = null\n        var nextState: Int = -2 // -2 for initial\n unknown, -1 for next unknown, 0 for done, 1 for continue\n        private fun calcNext() {\n            nextItem = if\n (nextState == -2) getInitialValue() else getNextValue(nextItem!!)\n            nextState = if (nextItem == null) 0 else\n 1\n        }\n        override fun next(): T {\n            if (nextState < 0)\n                calcNext()\n            if (nextState\n == 0)\n                throw NoSuchElementException()\n            val result = nextItem as T\n            // Do not clean\n            nextItem (to avoid keeping reference on yielded instance) -- need to keep state for getNextValue\n            nextState\n = -1\n            return result\n        }\n        override fun\n hasNext(): Boolean {\n            if (nextState < 0)\n                calcNext()\n            return nextState == 1\n        }\n    }\n}\n\n/**\n * Returns a wrapper sequence that provides\n values of this sequence, but ensures it can be iterated only one time.\n */\n * The operation is _intermediate_ and\n _stateless_.\n */\n * [IllegalStateException] is thrown on iterating the returned sequence for the second time and the

```

```

following times.\n * \n\npublic fun <T> Sequence<T>.constrainOnce(): Sequence<T> {\n // as? does not work
in js\n //return this as? ConstrainedOnceSequence<T>?: ConstrainedOnceSequence(this)\n return if (this is
ConstrainedOnceSequence<T>) this else ConstrainedOnceSequence(this)\n}\n\n/**\n * Returns a sequence which
invokes the function to calculate the next value on each iteration until the function returns `null`.\n * \n * The
returned sequence is constrained to be iterated only once.\n * \n * @see constrainOnce\n * @see
kotlin.sequences.sequence\n * \n * @sample samples.collections.Sequences.Building.generateSequence\n * \n\npublic
fun <T : Any> generateSequence(nextFunction: () -> T?): Sequence<T> {\n return
GeneratorSequence(nextFunction, { nextFunction() }).constrainOnce()\n}\n\n/**\n * Returns a sequence defined by
the starting value [seed] and the function [nextFunction],\n * which is invoked to calculate the next value based on
the previous one on each iteration.\n * \n * The sequence produces values until it encounters first `null` value.\n *
If [seed] is `null`, an empty sequence is produced.\n * \n * The sequence can be iterated multiple times, each time
starting with [seed].\n * \n * @see kotlin.sequences.sequence\n * \n * @sample
samples.collections.Sequences.Building.generateSequenceWithSeed\n
*\n\n@kotlin.internal.LowPriorityInOverloadResolution\n\npublic fun <T : Any> generateSequence(seed: T?,
nextFunction: (T) -> T?): Sequence<T> =\n if (seed == null)\n EmptySequence\n else\n
GeneratorSequence({ seed }, nextFunction)\n\n/**\n * Returns a sequence defined by the function [seedFunction],
which is invoked to produce the starting value,\n * and the [nextFunction], which is invoked to calculate the next
value based on the previous one on each iteration.\n * \n * The sequence produces values until it encounters first
`null` value.\n * \n * If [seedFunction] returns `null`, an empty sequence is produced.\n * \n * The sequence can be
iterated multiple times.\n * \n * @see kotlin.sequences.sequence\n * \n * @sample
samples.collections.Sequences.Building.generateSequenceWithLazySeed\n * \n\npublic fun <T : Any>
generateSequence(seedFunction: () -> T?, nextFunction: (T) -> T?): Sequence<T> =\n
GeneratorSequence(seedFunction, nextFunction)\n\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n\n@file:kotlin.jvm.JvmName("PreconditionsKt")\n\npackage
kotlin\n\nimport kotlin.contracts.contract\n\n/**\n * Throws an [IllegalArgumentException] if the [value] is false.\n
*\n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n * \n\n@kotlin.internal.InlineOnly\n\npublic
inline fun require(value: Boolean): Unit {\n contract {\n returns() implies value\n }\n require(value) {\n
"Failed requirement." }\n}\n\n/**\n * Throws an [IllegalArgumentException] with the result of calling
[lazyMessage] if the [value] is false.\n * \n * @sample samples.misc.Preconditions.failRequireWithLazyMessage\n
*\n\n@kotlin.internal.InlineOnly\n\npublic inline fun require(value: Boolean, lazyMessage: () -> Any): Unit {\n
contract {\n returns() implies value\n }\n if (!value) {\n val message = lazyMessage()\n throw
IllegalArgumentException(message.toString())\n }\n}\n\n/**\n * Throws an [IllegalArgumentException] if the
[value] is null. Otherwise returns the not null value.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline fun <T : Any>
requireNotNull(value: T?): T {\n contract {\n returns() implies (value != null)\n }\n return
requireNotNull(value) {"Required value was null." }\n}\n\n/**\n * Throws an [IllegalArgumentException] with
the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the not null value.\n * \n * @sample
samples.misc.Preconditions.failRequireNotNullWithLazyMessage\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline
fun <T : Any> requireNotNull(value: T?, lazyMessage: () -> Any): T {\n contract {\n returns() implies (value
!= null)\n }\n if (value == null) {\n val message = lazyMessage()\n throw
IllegalArgumentException(message.toString())\n } else {\n return value\n }\n}\n\n/**\n * Throws an
[IllegalStateException] if the [value] is false.\n * \n * @sample
samples.misc.Preconditions.failCheckWithLazyMessage\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline fun
check(value: Boolean): Unit {\n contract {\n returns() implies value\n }\n check(value) {"Check failed."
}\n}\n\n/**\n * Throws an [IllegalStateException] with the result of calling [lazyMessage] if the [value] is false.\n
*\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n * \n\n@kotlin.internal.InlineOnly\n\npublic
inline fun check(value: Boolean, lazyMessage: () -> Any): Unit {\n contract {\n returns() implies value\n }\n

```

```

if (!value) {\n    val message = lazyMessage()\n    throw IllegalStateException(message.toString())\n}\n}\n\n/**\n * Throws an [IllegalStateException] if the [value] is null. Otherwise\n * returns the not null value.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> checkNotNull(value: T?): T {\n    contract {\n        returns() implies (value != null)\n    }\n    return checkNotNull(value) { \"Required value was null.\" }\n}\n\n/**\n * Throws an [IllegalStateException] with the result of calling [lazyMessage] if the [value] is null. Otherwise\n * returns the not null value.\n *\n * @sample samples.misc.Preconditions.failCheckWithLazyMessage\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Any> checkNotNull(value: T?, lazyMessage: () -> Any): T {\n    contract {\n        returns() implies (value != null)\n    }\n    if (value == null) {\n        val message = lazyMessage()\n        throw\n        IllegalStateException(message.toString())\n    } else {\n        return value\n    }\n}\n\n/**\n * Throws an [IllegalStateException] with the given [message].\n *\n * @sample samples.misc.Preconditions.failWithError\n */\n@kotlin.internal.InlineOnly\npublic inline fun error(message: Any): Nothing = throw\n        IllegalStateException(message.toString())\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n * license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the\n * GenerateStandardLib.kt\n * See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.js.*\nimport primitiveArrayConcat\nimport withType\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun <T> Array<out T>.elementAt(index: Int): T {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun ByteArray.elementAt(index: Int): Byte {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun ShortArray.elementAt(index: Int): Short {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun IntArray.elementAt(index: Int): Int {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun LongArray.elementAt(index: Int): Long {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun FloatArray.elementAt(index: Int): Float {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun DoubleArray.elementAt(index: Int): Double {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun BooleanArray.elementAt(index: Int): Boolean {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException(\"index: $index, size: $size\") }\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic actual fun CharArray.elementAt(index: Int): Char

```

```

{\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size}")
}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n */\npublic actual fun <T> Array<out T>.asList():
List<T> {\n    return ArrayList<T>(this.unsafeCast<Array<Any?>>())\n}\n\n/**\n * Returns a [List] that wraps the
original array.\n */\n@kotlin.internal.InlineOnly\npublic actual inline fun ByteArray.asList(): List<Byte> {\n
return this.unsafeCast<Array<Byte>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun ShortArray.asList(): List<Short> {\n    return
this.unsafeCast<Array<Short>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun IntArray.asList(): List<Int> {\n    return
this.unsafeCast<Array<Int>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun LongArray.asList(): List<Long> {\n    return
this.unsafeCast<Array<Long>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun FloatArray.asList(): List<Float> {\n    return
this.unsafeCast<Array<Float>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun DoubleArray.asList(): List<Double> {\n    return
this.unsafeCast<Array<Double>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun BooleanArray.asList(): List<Boolean> {\n    return
this.unsafeCast<Array<Boolean>>().asList()\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*/\n\npublic actual fun CharArray.asList(): List<Char> {\n    return object : AbstractList<Char>(), RandomAccess {\n
        override val size: Int get() = this@asList.size\n        override fun isEmpty(): Boolean = this@asList.isEmpty()\n
        override fun contains(element: Char): Boolean = this@asList.contains(element)\n        override fun get(index: Int):
Char {\n            AbstractList.checkElementIndex(index, size)\n            return this@asList[index]\n        }\n
        override fun indexOf(element: Char): Int {\n            @Suppress("USELESS_CAST")\n            if ((element as
Any?) !is Char) return -1\n            return this@asList.indexOf(element)\n        }\n        override fun
lastIndexOf(element: Char): Int {\n            @Suppress("USELESS_CAST")\n            if ((element as Any?) !is
Char) return -1\n            return this@asList.lastIndexOf(element)\n        }\n    }\n}\n\n/**\n * Returns `true` if the
two specified arrays are *deeply* equal to one another.\n * i.e. contain the same number of the same elements in the
same order.\n * \n * If two corresponding elements are nested arrays, they are also compared deeply.\n * If any of
arrays contains itself on any nesting level the behavior is undefined.\n * \n * The elements of other types are
compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is
equal to itself and `-0.0` is not equal to `0.0`.\n
*/\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic actual infix fun <T>
Array<out T>.contentDeepEquals(other: Array<out T>): Boolean {\n    return
this.contentDeepEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *deeply* equal to one
another.\n * i.e. contain the same number of the same elements in the same order.\n * \n * The specified arrays are
also considered deeply equal if both are `null`.\n * \n * If two corresponding elements are nested arrays, they are
also compared deeply.\n * If any of arrays contains itself on any nesting level the behavior is undefined.\n * \n *
The elements of other types are compared for equality with the [equals][Any.equals] function.\n * For floating point
numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*/\n@SinceKotlin("1.4")\n@library("arrayDeepEquals")\npublic actual infix fun <T> Array<out
T>?.contentDeepEquals(other: Array<out T>?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns a hash code
based on the contents of this array as if it is [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays
contains itself on any nesting level the behavior is undefined.\n
*/\n\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic actual fun <T> Array<out
T>.contentDeepHashCode(): Int {\n    return this.contentDeepHashCode()\n}\n\n/**\n * Returns a hash code based
on the contents of this array as if it is [List].\n * Nested arrays are treated as lists too.\n * \n * If any of arrays
contains itself on any nesting level the behavior is undefined.\n
*/\n\n@SinceKotlin("1.4")\n@library("arrayDeepHashCode")\npublic actual fun <T> Array<out
T>?.contentDeepHashCode(): Int {\n    definedExternally\n}\n\n/**\n * Returns a string representation of the

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contents of this array as if it is a [List].  
 \* Nested arrays are treated as lists too.  
 \* If any of arrays contains itself on any nesting level that reference is rendered as "[...]" to prevent recursion.  
 \* @sample samples.collections.Arrays.ContentOperations.contentDeepToString

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*\n@SinceKotlin("1.1")\n@kotlin.internal.LowPriorityInOverloadResolution\npublic actual fun <T> Array<out T>.contentDeepToString(): String {\n    return this.contentDeepToString()\n}\n\n/**\n * Returns a string representation of the contents of this array as if it is a [List].\n * Nested arrays are treated as lists too.\n * If any of arrays contains itself on any nesting level that reference is rendered as "[...]" to prevent recursion.\n * @sample samples.collections.Arrays.ContentOperations.contentDeepToString\n */\n\n@SinceKotlin("1.4")\n@library("arrayDeepToString")\npublic actual fun <T> Array<out T>?.contentDeepToString(): String {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun <T> Array<out T>.contentEquals(other: Array<out T>): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun ByteArray.contentEquals(other: ByteArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun ShortArray.contentEquals(other: ShortArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun IntArray.contentEquals(other: IntArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun LongArray.contentEquals(other: LongArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun FloatArray.contentEquals(other: FloatArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n */
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*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun
DoubleArray.contentEquals(other: DoubleArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n *
Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of
the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals]
function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun
BooleanArray.contentEquals(other: BooleanArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n *
Returns `true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of
the same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals]
function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic actual infix fun
CharArray.contentEquals(other: CharArray): Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns
`true` if the two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the
same elements in the same order.\n * \n * The elements are compared for equality with the [equals][Any.equals]
function.\n * For floating point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun <T> Array<out
T>?.contentEquals(other: Array<out T>?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two
specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the
same order.\n * \n * The elements are compared for equality with the [equals][Any.equals] function.\n * For floating
point numbers it means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun ByteArray?.contentEquals(other:
ByteArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun ShortArray?.contentEquals(other:
ShortArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun IntArray?.contentEquals(other:
IntArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun LongArray?.contentEquals(other:
LongArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n
*\n@SinceKotlin("1.4")\n@library("arrayEquals")\npublic actual infix fun FloatArray?.contentEquals(other:
FloatArray?): Boolean {\n    definedExternally\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n
* The elements are compared for equality with the [equals][Any.equals] function.\n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\n

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*\/n@SinceKotlin("1.4")\/n@library("arrayEquals")\/npublic actual infix fun DoubleArray?.contentEquals(other:
DoubleArray?): Boolean {\/n  definedExternally\/n}\/n\/n**\/n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\/n * i.e. contain the same number of the same elements in the same order.\/n *
* The elements are compared for equality with the [equals][Any.equals] function.\/n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\/n
*\/n@SinceKotlin("1.4")\/n@library("arrayEquals")\/npublic actual infix fun BooleanArray?.contentEquals(other:
BooleanArray?): Boolean {\/n  definedExternally\/n}\/n\/n**\/n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\/n * i.e. contain the same number of the same elements in the same order.\/n *
* The elements are compared for equality with the [equals][Any.equals] function.\/n * For floating point numbers it
means that `NaN` is equal to itself and `-0.0` is not equal to `0.0`.\/n
*\/n@SinceKotlin("1.4")\/n@library("arrayEquals")\/npublic actual infix fun CharArray?.contentEquals(other:
CharArray?): Boolean {\/n  definedExternally\/n}\/n\/n**\/n * Returns a hash code based on the contents of this array
as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun <T>
Array<out T>.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based
on the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
ByteArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
ShortArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
IntArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
LongArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
FloatArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
DoubleArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based
on the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
BooleanArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based
on the contents of this array as if it is [List].\/n *\/n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\/n@SinceKotlin("1.1")\/n@DeprecatedSinceKotlin(hiddenSince = "1.4")\/npublic actual fun
CharArray.contentHashCode(): Int {\/n  return this.contentHashCode()\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@SinceKotlin("1.4")\/n@library("arrayHashCode")\/npublic actual
fun <T> Array<out T>?.contentHashCode(): Int {\/n  definedExternally\/n}\/n\/n**\/n * Returns a hash code based on
the contents of this array as if it is [List].\/n *\/n@SinceKotlin("1.4")\/n@library("arrayHashCode")\/npublic actual
fun ByteArray?.contentHashCode(): Int {\/n  definedExternally\/n}\/n\/n**\/n * Returns a hash code based on the
contents of this array as if it is [List].\/n *\/n@SinceKotlin("1.4")\/n@library("arrayHashCode")\/npublic actual fun
ShortArray?.contentHashCode(): Int {\/n  definedExternally\/n}\/n\/n**\/n * Returns a hash code based on the
contents of this array as if it is [List].\/n *\/n@SinceKotlin("1.4")\/n@library("arrayHashCode")\/npublic actual fun
IntArray?.contentHashCode(): Int {\/n  definedExternally\/n}\/n\/n**\/n * Returns a hash code based on the contents
of this array as if it is [List].\/n *\/n@SinceKotlin("1.4")\/n@library("arrayHashCode")\/npublic actual fun

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`LongArray?.contentHashCode(): Int` {\n definedExternally\n}\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@SinceKotlin("1.4")\n@library("arrayHashCode")\npublic actual fun

`FloatArray?.contentHashCode(): Int` {\n definedExternally\n}\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@SinceKotlin("1.4")\n@library("arrayHashCode")\npublic actual fun

`DoubleArray?.contentHashCode(): Int` {\n definedExternally\n}\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@SinceKotlin("1.4")\n@library("arrayHashCode")\npublic actual fun

`BooleanArray?.contentHashCode(): Int` {\n definedExternally\n}\n\n/\*\*\n \* Returns a hash code based on the contents of this array as if it is [List].\n \*/\n@SinceKotlin("1.4")\n@library("arrayHashCode")\npublic actual fun

`CharArray?.contentHashCode(): Int` {\n definedExternally\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun <T> Array<out T>.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun ByteArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun ShortArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun IntArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun LongArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun FloatArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun DoubleArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun BooleanArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.1")\n@DeprecatedSinceKotlin(hiddenSince = "1.4")\npublic

`actual fun CharArray.contentToString(): String` {\n return this.contentToString()\n}\n\n/\*\*\n \* Returns a string representation of the contents of the specified array as if it is [List].\n \*/\n \* @sample

`samples.collections.Arrays.ContentOperations.contentToString`\n \*/\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation warning.")\n@SinceKotlin("1.4")\n@library("arrayToString")\npublic actual fun <T> Array<out T>?.contentToString():

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String { \n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as
if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun ByteArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun ShortArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun IntArray?.contentToString(): String {\n
definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun LongArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun FloatArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun DoubleArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun BooleanArray?.contentToString():
String {\n  definedExternally\n}\n\n/**\n * Returns a string representation of the contents of the specified array as
if it is [List].\n * \n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@\n@SinceKotlin("1.4")\n@library("arrayToString")\n\npublic actual fun CharArray?.contentToString(): String
{\n  definedExternally\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that
array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it
overlaps with the destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset
the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of
the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this
array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex]
or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n * @throws
IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified
[destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the
[destination] array.\n
*\n@\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT
_ARGUMENTS")\n\npublic actual inline fun <T> Array<out T>.copyInto(destination: Array<T>, destinationOffset:
Int = 0, startIndex: Int = 0, endIndex: Int = size): Array<T> {\n  arrayCopy(this, destination, destinationOffset,
startIndex, endIndex)\n  return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination]
array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the
subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy to.\n *
@param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the
beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive) of the
subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex
> endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array
starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n
*\n * @return the [destination] array.\n
*\n@\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT
_ARGUMENTS")

```

```

_ARGUMENTS`)
public actual inline fun ByteArray.copyInto(destination: ByteArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): ByteArray {
    arrayCopy(this.unsafeCast<Array<Byte>>(),
destination.unsafeCast<Array<Byte>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun ShortArray.copyInto(destination: ShortArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): ShortArray {
    arrayCopy(this.unsafeCast<Array<Short>>(),
destination.unsafeCast<Array<Short>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun IntArray.copyInto(destination: IntArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): IntArray {
    arrayCopy(this.unsafeCast<Array<Int>>(),
destination.unsafeCast<Array<Int>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.
 * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],
 * or when that index is out of the [destination] array indices range.
 * @return the [destination] array.
 */
@SinceKotlin("1.3")
@kotlin.internal.InlineOnly
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual inline fun LongArray.copyInto(destination: LongArray, destinationOffset: Int = 0,
startIndex: Int = 0, endIndex: Int = size): LongArray {
    arrayCopy(this.unsafeCast<Array<Long>>(),
destination.unsafeCast<Array<Long>>(), destinationOffset, startIndex, endIndex)
    return destination
}

/**
 * Copies this array or its subrange into the [destination] array and returns that array.
 * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range.
 * @param destination the array to copy to.
 * @param destinationOffset the position in the [destination] array to copy to, 0 by default.
 * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.
 * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.
 * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this

```

array indices or when `startIndex > endIndex`. \n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset], \n \* or when that index is out of the [destination] array indices range. \n \* \n \* @return the [destination] array. \n

```

*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun FloatArray.copyInto(destination: FloatArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): FloatArray {\n    arrayCopy(this.unsafeCast<Array<Float>>(), destination.unsafeCast<Array<Float>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array. \n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range. \n * \n * @param destination the array to copy to. \n * @param destinationOffset the position in the [destination] array to copy to, 0 by default. \n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default. \n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default. \n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset], \n * or when that index is out of the [destination] array indices range. \n * \n * @return the [destination] array. \n

```

```

*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun DoubleArray.copyInto(destination: DoubleArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): DoubleArray {\n    arrayCopy(this.unsafeCast<Array<Double>>(), destination.unsafeCast<Array<Double>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array. \n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range. \n * \n * @param destination the array to copy to. \n * @param destinationOffset the position in the [destination] array to copy to, 0 by default. \n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default. \n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default. \n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset], \n * or when that index is out of the [destination] array indices range. \n * \n * @return the [destination] array. \n

```

```

*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun BooleanArray.copyInto(destination: BooleanArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): BooleanArray {\n    arrayCopy(this.unsafeCast<Array<Boolean>>(), destination.unsafeCast<Array<Boolean>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array. \n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the destination range. \n * \n * @param destination the array to copy to. \n * @param destinationOffset the position in the [destination] array to copy to, 0 by default. \n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default. \n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default. \n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset], \n * or when that index is out of the [destination] array indices range. \n * \n * @return the [destination] array. \n

```

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*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun CharArray.copyInto(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size): CharArray {\n    arrayCopy(this.unsafeCast<Array<Char>>(), destination.unsafeCast<Array<Char>>(), destinationOffset, startIndex, endIndex)\n    return destination\n}\n\n/**\n * Returns new array which is a copy of the original array. \n * \n * @sample

```

```

samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"ACTUAL_WITHOUT_EXPECT\\",
\\"NOTHING_TO_INLINE\\")\npublic actual inline fun <T> Array<out T>.copyOf(): Array<T> {\n return
this.asDynamic().slice()\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic
actual inline fun ByteArray.copyOfOf(): ByteArray {\n return this.asDynamic().slice()\n}\n\n/**\n * Returns new
array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic
actual inline fun ShortArray.copyOfOf(): ShortArray {\n return this.asDynamic().slice()\n}\n\n/**\n * Returns new
array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic
actual inline fun IntArray.copyOfOf(): IntArray {\n return this.asDynamic().slice()\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n
*\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun LongArray.copyOfOf(): LongArray {\n return withType(\\"LongArray\\",
this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic
actual inline fun FloatArray.copyOfOf(): FloatArray {\n return this.asDynamic().slice()\n}\n\n/**\n * Returns new
array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic
actual inline fun DoubleArray.copyOfOf(): DoubleArray {\n return this.asDynamic().slice()\n}\n\n/**\n * Returns
new array which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun BooleanArray.copyOfOf():
BooleanArray {\n return withType(\\"BooleanArray\\", this.asDynamic().slice())\n}\n\n/**\n * Returns new array
which is a copy of the original array.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.copyOfOf\n
*\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun CharArray.copyOfOf(): CharArray {\n return withType(\\"CharArray\\",
this.asDynamic().slice())\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given
[newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize]
is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater
than the size of the original array, the extra elements in the copy array are filled with zero values.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun
ByteArray.copyOfOf(newSize: Int): ByteArray {\n require(newSize >= 0) { \\"Invalid new array size: $newSize.\\\"
}\n return fillFrom(this, ByteArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original
array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if
necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated to the
[newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are
filled with zero values.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun
ShortArray.copyOfOf(newSize: Int): ShortArray {\n require(newSize >= 0) { \\"Invalid new
array size: $newSize.\\\" }\n return fillFrom(this, ShortArray(newSize))\n}\n\n/**\n * Returns new array which is a
copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at the end with
zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array is truncated
to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the copy array
are filled with zero values.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual fun
IntArray.copyOfOf(newSize: Int): IntArray {\n require(newSize >= 0) { \\"Invalid new array size: $newSize.\\\" }\n
return fillFrom(this, IntArray(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array,
resized to the given [newSize].\n * The copy is either truncated or padded at the end with zero values if necessary.\n
*\n * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].\n * - If
[newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero
values.\n * \n * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf\n *\n@Suppress(\\"NOTHING_TO_INLINE\\")\npublic actual

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fun LongArray.copyOf(newSize: Int): LongArray {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return withType("LongArray", arrayCopyResize(this, newSize, 0L))
}
/* Returns new array which is a copy of the original array, resized to the given [newSize].
 * The copy is either truncated or padded at the end with zero values if necessary.
 * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].
 * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.
 * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf
public actual fun
FloatArray.copyOf(newSize: Int): FloatArray {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return fillFrom(this, FloatArray(newSize))
}
/* Returns new array which is a copy of the original array, resized to the given [newSize].
 * The copy is either truncated or padded at the end with zero values if necessary.
 * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].
 * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with zero values.
 * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf
public actual fun
DoubleArray.copyOf(newSize: Int): DoubleArray {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return fillFrom(this, DoubleArray(newSize))
}
/* Returns new array which is a copy of the original array, resized to the given [newSize].
 * The copy is either truncated or padded at the end with `false` values if necessary.
 * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].
 * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `false` values.
 * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf
public actual fun
BooleanArray.copyOf(newSize: Int): BooleanArray {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return withType("BooleanArray", arrayCopyResize(this, newSize, false))
}
/* Returns new array which is a copy of the original array, resized to the given [newSize].
 * The copy is either truncated or padded at the end with null char (`\u0000`) values if necessary.
 * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].
 * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with null char (`\u0000`) values.
 * @sample
samples.collections.Arrays.CopyOfOperations.resizedPrimitiveCopyOf
public actual fun
CharArray.copyOf(newSize: Int): CharArray {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return withType("CharArray", fillFrom(this, CharArray(newSize)))
}
/* Returns new array which is a copy of the original array, resized to the given [newSize].
 * The copy is either truncated or padded at the end with `null` values if necessary.
 * - If [newSize] is less than the size of the original array, the copy array is truncated to the [newSize].
 * - If [newSize] is greater than the size of the original array, the extra elements in the copy array are filled with `null` values.
 * @sample
samples.collections.Arrays.CopyOfOperations.resizingCopyOf
@Suppress("ACTUAL_WITHOUT_EXPECT")
public actual fun <T> Array<out T>.copyOf(newSize: Int): Array<T?> {
    require(newSize >= 0) { "Invalid new array size: $newSize." }
    return arrayCopyResize(this, newSize, null)
}
/* Returns a new array which is a copy of the specified range of the original array.
 * @param fromIndex the start of the range (inclusive) to copy.
 * @param toIndex the end of the range (exclusive) to copy.
 * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].
@Suppress("ACTUAL_WITHOUT_EXPECT")
public actual fun <T> Array<out T>.copyOfRange(fromIndex: Int, toIndex: Int): Array<T> {
    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)
    return this.asDynamic().slice(fromIndex, toIndex)
}
/* Returns a new array which is a copy of the specified range of the original array.
 * @param fromIndex the start of the range (inclusive) to copy.
 * @param toIndex the end of the range (exclusive) to copy.
 * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.
 * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].
public actual fun
ByteArray.copyOfRange(fromIndex: Int, toIndex: Int): ByteArray {

```

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AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
actual fun ShortArray.copyOfRange(fromIndex: Int, toIndex: Int): ShortArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
actual fun IntArray.copyOfRange(fromIndex: Int, toIndex: Int): IntArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
actual fun LongArray.copyOfRange(fromIndex: Int, toIndex: Int): LongArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return withType(<code>"LongArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified
range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n * @param
toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if
[fromIndex] is greater than [toIndex].\n */\npublic actual fun FloatArray.copyOfRange(fromIndex: Int, toIndex: Int):
FloatArray {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return
this.asDynamic().slice(fromIndex, toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range
of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the
end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n */\npublic actual fun DoubleArray.copyOfRange(fromIndex: Int, toIndex: Int): DoubleArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return this.asDynamic().slice(fromIndex,
toIndex)\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n *
@param fromIndex the start of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to
copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the
size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n */\npublic
actual fun BooleanArray.copyOfRange(fromIndex: Int, toIndex: Int): BooleanArray {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return withType(<code>"BooleanArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the specified
range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n * @param
toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is
less than zero or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if
[fromIndex] is greater than [toIndex].\n */\npublic actual fun CharArray.copyOfRange(fromIndex: Int, toIndex: Int):
CharArray {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    return withType(<code>"CharArray"</code>,
this.asDynamic().slice(fromIndex, toIndex))\n}\n\n/**\n * Fills this array or its subrange with the specified
[element] value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param
toIndex the end of the range (exclusive) to fill, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n

```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun <T> Array<T>.fill(element: T, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun ByteArray.fill(element: Byte, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun ShortArray.fill(element: Short, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun IntArray.fill(element: Int, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun LongArray.fill(element: Long, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic  
actual fun FloatArray.fill(element: Float, fromIndex: Int = 0, toIndex: Int = size): Unit {\n  
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    this.asDynamic().fill(element, fromIndex,  
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param  
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)  
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero  
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater  
than [toIndex].\n
```

```

*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun DoubleArray.fill(element: Double, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  this.asDynamic().fill(element, fromIndex,
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun BooleanArray.fill(element: Boolean, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  this.asDynamic().fill(element, fromIndex,
toIndex);\n}\n\n/**\n * Fills this array or its subrange with the specified [element] value.\n * \n * @param
fromIndex the start of the range (inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive)
to fill, size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@SinceKotlin("1.3")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun CharArray.fill(element: Char, fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  this.asDynamic().fill(element, fromIndex,
toIndex);\n}\n\n/**\n * Returns an array containing all elements of the original array and then the given [element].\n
*\n@Suppress("ACTUAL_WITHOUT_EXPECT", "NOTHING_TO_INLINE")\npublic actual inline operator
fun <T> Array<out T>.plus(element: T): Array<T> {\n  return
this.asDynamic().concat(arrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original
array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator
fun ByteArray.plus(element: Byte): ByteArray {\n  return plus(byteArrayOf(element))\n}\n\n/**\n * Returns an
array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun ShortArray.plus(element: Short):
ShortArray {\n  return plus(shortArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline
operator fun IntArray.plus(element: Int): IntArray {\n  return plus(intArrayOf(element))\n}\n\n/**\n * Returns an
array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun LongArray.plus(element: Long):
LongArray {\n  return plus(longArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the
original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline
operator fun FloatArray.plus(element: Float): FloatArray {\n  return plus(floatArrayOf(element))\n}\n\n/**\n *
Returns an array containing all elements of the original array and then the given [element].\n
*\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun DoubleArray.plus(element:
Double): DoubleArray {\n  return plus(doubleArrayOf(element))\n}\n\n/**\n * Returns an array containing all
elements of the original array and then the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic
actual inline operator fun BooleanArray.plus(element: Boolean): BooleanArray {\n  return
plus(booleanArrayOf(element))\n}\n\n/**\n * Returns an array containing all elements of the original array and then
the given [element].\n *\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline operator fun
CharArray.plus(element: Char): CharArray {\n  return plus(charArrayOf(element))\n}\n\n/**\n * Returns an array
containing all elements of the original array and then all elements of the given [elements] collection.\n
*\n@Suppress("ACTUAL_WITHOUT_EXPECT")\npublic actual operator fun <T> Array<out T>.plus(elements:
Collection<T>): Array<T> {\n  return arrayPlusCollection(this, elements)\n}\n\n/**\n * Returns an array
containing all elements of the original array and then all elements of the given [elements] collection.\n *\npublic
actual operator fun ByteArray.plus(elements: Collection<Byte>): ByteArray {\n  return

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fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun ShortArray.plus(elements: Collection<Short>): ShortArray {\n return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun IntArray.plus(elements: Collection<Int>): IntArray {\n return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun LongArray.plus(elements: Collection<Long>): LongArray {\n return arrayPlusCollection(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun FloatArray.plus(elements: Collection<Float>): FloatArray {\n return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun DoubleArray.plus(elements: Collection<Double>): DoubleArray {\n return arrayPlusCollection(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun BooleanArray.plus(elements: Collection<Boolean>): BooleanArray {\n return arrayPlusCollection(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] collection.\n \*/\npublic actual operator fun CharArray.plus(elements: Collection<Char>): CharArray {\n return fillFromCollection(this.copyOf(size + elements.size), this.size, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("ACTUAL\_WITHOUT\_EXPECT", "NOTHING\_TO\_INLINE")\npublic actual inline operator fun <T> Array<out T>.plus(elements: Array<out T>): Array<T> {\n return this.asDynamic().concat(elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun ByteArray.plus(elements: ByteArray): ByteArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun ShortArray.plus(elements: ShortArray): ShortArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun IntArray.plus(elements: IntArray): IntArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun LongArray.plus(elements: LongArray): LongArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun FloatArray.plus(elements: FloatArray): FloatArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun DoubleArray.plus(elements: DoubleArray): DoubleArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun BooleanArray.plus(elements: BooleanArray): BooleanArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing all elements of the original array and then all elements of the given [elements] array.\n \*/\n@Suppress("NOTHING\_TO\_INLINE")\npublic actual inline operator fun CharArray.plus(elements: CharArray): CharArray {\n return primitiveArrayConcat(this, elements)\n}\n\n/\*\*\n \* Returns an array containing

all elements of the original array and then the given [element].\n

```

*\n@Suppress("ACTUAL_WITHOUT_EXPECT", "NOTHING_TO_INLINE")\npublic actual inline fun <T>
Array<out T>.plusElement(element: T): Array<T> {\n    return
this.asDynamic().concat(arrayOf(element))\n}\n\n/**\n * Sorts the array in-place.\n * \n * @sample
samples.collections.Arrays.Sorting.sortArray\n *\n@library("primitiveArraySort")\npublic actual fun
IntArray.sort(): Unit {\n    definedExternally\n}\n\n/**\n * Sorts the array in-place.\n * \n * @sample
samples.collections.Arrays.Sorting.sortArray\n *\npublic actual fun LongArray.sort(): Unit {\n
@Suppress("DEPRECATION")\n    if (size > 1) sort { a: Long, b: Long -> a.compareTo(b) }\n}\n\n/**\n * Sorts
the array in-place.\n * \n * @sample samples.collections.Arrays.Sorting.sortArray\n
*\n@library("primitiveArraySort")\npublic actual fun ByteArray.sort(): Unit {\n    definedExternally\n}\n\n/**\n
* Sorts the array in-place.\n * \n * @sample samples.collections.Arrays.Sorting.sortArray\n
*\n@library("primitiveArraySort")\npublic actual fun ShortArray.sort(): Unit {\n    definedExternally\n}\n\n/**\n
* Sorts the array in-place.\n * \n * @sample samples.collections.Arrays.Sorting.sortArray\n
*\n@library("primitiveArraySort")\npublic actual fun DoubleArray.sort(): Unit {\n
definedExternally\n}\n\n/**\n * Sorts the array in-place.\n * \n * @sample
samples.collections.Arrays.Sorting.sortArray\n *\n@library("primitiveArraySort")\npublic actual fun
FloatArray.sort(): Unit {\n    definedExternally\n}\n\n/**\n * Sorts the array in-place.\n * \n * @sample
samples.collections.Arrays.Sorting.sortArray\n *\n@library("primitiveArraySort")\npublic actual fun
CharArray.sort(): Unit {\n    definedExternally\n}\n\n/**\n * Sorts the array in-place according to the natural order
of its elements.\n * \n * The sort is _stable_. It means that equal elements preserve their order relative to each other
after sorting.\n * \n * @sample samples.collections.Arrays.Sorting.sortArrayOfComparable\n *\npublic actual fun
<T : Comparable<T>> Array<out T>.sort(): Unit {\n    if (size > 1) sortArray(this)\n}\n\n/**\n * Sorts the array in-
place according to the order specified by the given [comparison] function.\n * \n * The sort is _stable_. It means that
equal elements preserve their order relative to each other after sorting.\n * \n *@Deprecated("Use sortWith instead",
ReplaceWith("this.sortWith(Comparator(comparison))"))\n@DeprecatedSinceKotlin(warningSince =
"1.6")\npublic fun <T> Array<out T>.sort(comparison: (a: T, b: T) -> Int): Unit {\n    if (size > 1)
sortArrayWith(this, comparison)\n}\n\n/**\n * Sorts a range in the array in-place.\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n * \n * @param fromIndex the
start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size
of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex]
is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than
[toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArrayOfComparable\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun <T : Comparable<T>> Array<out T>.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    sortArrayWith(this, fromIndex, toIndex,
naturalOrder())\n}\n\n/**\n * Sorts a range in the array in-place.\n * \n * @param fromIndex the start of the range
(inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n *
@sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun ByteArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<ByteArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample

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samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun ShortArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<ShortArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun IntArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<IntArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun LongArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    sortArrayWith(this.unsafeCast<Array<Long>>(),
fromIndex, toIndex, naturalOrder())\n}\n\n/**\n * Sorts a range in the array in-place.\n * \n * @param fromIndex
the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex the end of the range (exclusive) to sort,
size of this array by default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or
[toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than
[toIndex].\n * \n * @sample samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun FloatArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<FloatArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun DoubleArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =
this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<DoubleArray>()\n    subarray.sort()\n}\n\n/**\n * Sorts a
range in the array in-place.\n * \n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n *
@param toIndex the end of the range (exclusive) to sort, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n * \n * @sample
samples.collections.Arrays.Sorting.sortRangeOfArray\n
*\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun CharArray.sort(fromIndex: Int = 0, toIndex: Int = size): Unit {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    val subarray =

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this.asDynamic().subarray(fromIndex, toIndex).unsafeCast<CharArray>()\n  subarray.sort()\n}\n\n/**\n * Sorts the
array in-place according to the order specified by the given [comparison] function.\n */\n@Deprecated("Use other
sorting functions from the Standard Library")\n@DeprecatedSinceKotlin(warningSince =
"1.6")\n@kotlin.internal.InlineOnly\npublic inline fun ByteArray.sort(noinline comparison: (a: Byte, b: Byte) ->
Int): Unit {\n  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified
by the given [comparison] function.\n */\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.sort(noinline comparison: (a: Short, b: Short) -> Int): Unit {\n
  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparison] function.\n */\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.sort(noinline comparison: (a: Int, b: Int) -> Int): Unit {\n  asDynamic().sort(comparison)\n}\n\n/**\n *
Sorts the array in-place according to the order specified by the given [comparison] function.\n
*/\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.sort(noinline comparison: (a: Long, b: Long) -> Int): Unit {\n
  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparison] function.\n */\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
FloatArray.sort(noinline comparison: (a: Float, b: Float) -> Int): Unit {\n
  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparison] function.\n */\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
DoubleArray.sort(noinline comparison: (a: Double, b: Double) -> Int): Unit {\n
  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparison] function.\n */\n@Deprecated("Use other sorting functions from the Standard
Library")\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
CharArray.sort(noinline comparison: (a: Char, b: Char) -> Int): Unit {\n
  asDynamic().sort(comparison)\n}\n\n/**\n * Sorts the array in-place according to the order specified by the given
[comparator].\n */\n * The sort is _stable_. It means that equal elements preserve their order relative to each other
after sorting.\n */\npublic actual fun <T> Array<out T>.sortWith(comparator: Comparator<in T>): Unit {\n  if
(size > 1) sortArrayWith(this, comparator)\n}\n\n/**\n * Sorts a range in the array in-place with the given
[comparator].\n */\n * The sort is _stable_. It means that equal elements preserve their order relative to each other
after sorting.\n */\n * @param fromIndex the start of the range (inclusive) to sort, 0 by default.\n * @param toIndex
the end of the range (exclusive) to sort, size of this array by default.\n * @throws IndexOutOfBoundsException
if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*/\n@SinceKotlin("1.4")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun <T> Array<out T>.sortWith(comparator: Comparator<in T>, fromIndex: Int = 0, toIndex: Int = size):
Unit {\n  AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n  sortArrayWith(this, fromIndex, toIndex,
comparator)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive array.\n
*/\npublic actual fun ByteArray.toTypedArray(): Array<Byte> {\n  return js("[]").slice.call(this)\n}\n\n/**\n *
Returns a *typed* object array containing all of the elements of this primitive array.\n */\npublic actual fun
ShortArray.toTypedArray(): Array<Short> {\n  return js("[]").slice.call(this)\n}\n\n/**\n * Returns a *typed*
object array containing all of the elements of this primitive array.\n */\npublic actual fun IntArray.toTypedArray():
Array<Int> {\n  return js("[]").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the
elements of this primitive array.\n */\npublic actual fun LongArray.toTypedArray(): Array<Long> {\n  return
js("[]").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive

```

```

array.\n *^/npublic actual fun FloatArray.toArray(): Array<Float> {\n  return
js("[\n]").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun DoubleArray.toArray(): Array<Double> {\n  return
js("[\n]").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun BooleanArray.toArray(): Array<Boolean> {\n  return
js("[\n]").slice.call(this)\n}\n\n/**\n * Returns a *typed* object array containing all of the elements of this primitive
array.\n *^/npublic actual fun CharArray.toArray(): Array<Char> {\n  return Array(size) { index ->
this[index] }\n}\n\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*/\n@file:kotlin.jvm.JvmName("ComparisonsKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
kotlin.comparisons\n\n/**\n * Compares two values using the specified functions [selectors] to calculate the result
of the comparison.\n * The functions are called sequentially, receive the given values [a] and [b] and return
[Comparable]\n * objects. As soon as the [Comparable] instances returned by a function for [a] and [b] values do
not\n * compare as equal, the result of that comparison is returned.\n * \n * @sample
samples.comparisons.Comparisons.compareValuesByWithSelectors\n *^/npublic fun <T> compareValuesBy(a: T,
b: T, vararg selectors: (T) -> Comparable<*>?): Int {\n  require(selectors.size > 0)\n  return
compareValuesByImpl(a, b, selectors)\n}\n\nprivate fun <T> compareValuesByImpl(a: T, b: T, selectors:
Array<out (T) -> Comparable<*>?): Int {\n  for (fn in selectors) {\n    val v1 = fn(a)\n    val v2 = fn(b)\n    val diff = compareValues(v1, v2)\n    if (diff != 0) return diff\n  }\n  return 0\n}\n\n/**\n * Compares two
values using the specified [selector] function to calculate the result of the comparison.\n * The function is applied to
the given values [a] and [b] and return [Comparable] objects.\n * The result of comparison of these [Comparable]
instances is returned.\n * \n * @sample samples.comparisons.Comparisons.compareValuesByWithSingleSelector\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <T> compareValuesBy(a: T, b: T, selector: (T) ->
Comparable<*>?): Int {\n  return compareValues(selector(a), selector(b))\n}\n\n/**\n * Compares two values
using the specified [selector] function to calculate the result of the comparison.\n * The function is applied to the
given values [a] and [b] and return objects of type K which are then being\n * compared with the given
[comparator].\n * \n * @sample samples.comparisons.Comparisons.compareValuesByWithComparator\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun <T, K> compareValuesBy(a: T, b: T, comparator: Comparator<in
K>, selector: (T) -> K): Int {\n  return comparator.compare(selector(a), selector(b))\n}\n\n//// Not so useful without
type inference for receiver of expression\n//// compareValuesWith(v1, v2, compareBy { it.prop1 }
thenByDescending { it.prop2 })\n\n/**\n * Compares two values using the specified [comparator].\n\n
*/\n\n@Suppress("NOTHING_TO_INLINE")\npublic inline fun <T> compareValuesWith(a: T, b: T, comparator:
Comparator<T>): Int = comparator.compare(a, b)\n\n/**\n * Compares two nullable [Comparable] values. Null
is considered less than any value.\n * \n * @sample samples.comparisons.Comparisons.compareValues\n *^/npublic
fun <T : Comparable<*>> compareValues(a: T?, b: T?): Int {\n  if (a === b) return 0\n  if (a == null) return -1\n
if (b == null) return 1\n  @Suppress("UNCHECKED_CAST")\n  return (a as
Comparable<Any>).compareTo(b)\n}\n\n/**\n * Creates a comparator using the sequence of functions to calculate a
result of comparison.\n * The functions are called sequentially, receive the given values `a` and `b` and return
[Comparable]\n * objects. As soon as the [Comparable] instances returned by a function for `a` and `b` values do
not\n * compare as equal, the result of that comparison is returned from the [Comparator].\n * \n * @sample
samples.comparisons.Comparisons.compareByWithSelectors\n *^/npublic fun <T> compareBy(vararg selectors: (T)
-> Comparable<*>?): Comparator<T> {\n  require(selectors.size > 0)\n  return Comparator { a, b ->
compareValuesByImpl(a, b, selectors) }\n}\n\n/**\n * Creates a comparator using the function to transform value
to a [Comparable] instance for comparison.\n * \n * @sample
samples.comparisons.Comparisons.compareByWithSingleSelector\n *^/n@kotlin.internal.InlineOnly\npublic inline
fun <T> compareBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =\n  Comparator { a, b ->
compareValuesBy(a, b, selector) }\n\n/**\n * Creates a comparator using the [selector] function to transform values

```

being compared and then applying the specified [comparator] to compare transformed values.

```

@sample
samples.comparisons.Comparisons.compareByWithComparator
    @kotlin.internal.InlineOnly
    public inline
    fun <T, K> compareBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
        Comparator { a, b -> compareValuesBy(a, b, comparator, selector) }
    /**
     * Creates a descending comparator using the function to transform value to a [Comparable] instance for comparison.
     * @sample
     samples.comparisons.Comparisons.compareByDescendingWithSingleSelector
    @kotlin.internal.InlineOnly
    public inline fun <T> compareByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
        Comparator { a, b -> compareValuesBy(b, a, selector) }
    /**
     * Creates a descending comparator using the [selector] function to transform values being compared and then applying the specified [comparator] to compare transformed values.
     * Note that an order of [comparator] is reversed by this wrapper.
     * @sample
     samples.comparisons.Comparisons.compareByDescendingWithComparator
    @kotlin.internal.InlineOnly
    public inline fun <T, K> compareByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
        Comparator { a, b -> compareValuesBy(b, a, comparator, selector) }
    /**
     * Creates a comparator comparing values after the primary comparator defined them equal. It uses the function to transform value to a [Comparable] instance for comparison.
     * @sample
     samples.comparisons.Comparisons.thenBy
    @kotlin.internal.InlineOnly
    public inline fun <T> Comparator<T>.thenBy(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@thenBy.compare(a, b)
            if (previousCompare != 0) previousCompare else
            compareValuesBy(a, b, selector)
        }
    /**
     * Creates a comparator comparing values after the primary comparator defined them equal. It uses the [selector] function to transform values and then compares them with the given [comparator].
     * @sample
     samples.comparisons.Comparisons.thenByWithComparator
    @kotlin.internal.InlineOnly
    public inline fun <T, K> Comparator<T>.thenBy(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@thenBy.compare(a, b)
            if (previousCompare != 0) previousCompare else
            compareValuesBy(a, b, comparator, selector)
        }
    /**
     * Creates a descending comparator using the primary comparator and the function to transform value to a [Comparable] instance for comparison.
     * @sample
     samples.comparisons.Comparisons.thenByDescending
    @kotlin.internal.InlineOnly
    public inline fun <T> Comparator<T>.thenByDescending(crossinline selector: (T) -> Comparable<*>?): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@thenByDescending.compare(a, b)
            if (previousCompare != 0) previousCompare else
            compareValuesBy(b, a, selector)
        }
    /**
     * Creates a descending comparator comparing values after the primary comparator defined them equal. It uses the [selector] function to transform values and then compares them with the given [comparator].
     * @sample
     samples.comparisons.Comparisons.thenByDescendingWithComparator
    @kotlin.internal.InlineOnly
    public inline fun <T, K> Comparator<T>.thenByDescending(comparator: Comparator<in K>, crossinline selector: (T) -> K): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@thenByDescending.compare(a, b)
            if (previousCompare != 0) previousCompare else
            compareValuesBy(b, a, comparator, selector)
        }
    /**
     * Creates a comparator using the primary comparator and function to calculate a result of comparison.
     * @sample
     samples.comparisons.Comparisons.thenComparator
    @kotlin.internal.InlineOnly
    public inline fun <T> Comparator<T>.thenComparator(crossinline comparison: (a: T, b: T) -> Int): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@thenComparator.compare(a, b)
            if (previousCompare != 0) previousCompare else
            comparison(a, b)
        }
    /**
     * Combines this comparator and the given [comparator] such that the latter is applied only when the former considered values equal.
     * @sample
     samples.comparisons.Comparisons.then
    @public infix fun <T> Comparator<T>.then(comparator: Comparator<in T>): Comparator<T> =
        Comparator { a, b ->
            val previousCompare = this@then.compare(a, b)
            if (previousCompare != 0) previousCompare else
            comparator.compare(a, b)
        }
    /**
     * Combines this comparator and the given [comparator] such that the latter is applied only when the former considered values equal.
     * @sample
     samples.comparisons.Comparisons.thenDescending
    @public

```

```

infix fun <T> Comparator<T>.thenDescending(comparator: Comparator<in T>): Comparator<T> =\n
Comparator<T> { a, b ->\n    val previousCompare = this@thenDescending.compare(a, b)\n    if
(previousCompare != 0) previousCompare else comparator.compare(b, a)\n    }\n\n// Not so useful without type
inference for receiver of expression\n/**\n * Extends the given [comparator] of non-nullable values to a comparator
of nullable values\n * considering `null` value less than any other value.\n *\n * @sample
samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T : Any>
nullsFirst(comparator: Comparator<in T>): Comparator<T?> =\n    Comparator { a, b ->\n        when {\n            a
=== b -> 0\n            a == null -> -1\n            b == null -> 1\n            else -> comparator.compare(a, b)\n        }\n    }\n\n/**\n * Provides a comparator of nullable [Comparable] values\n * considering `null` value less than any other
value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Comparable<T>> nullsFirst(): Comparator<T?> =
nullsFirst(naturalOrder())\n\n/**\n * Extends the given [comparator] of non-nullable values to a comparator of
nullable values\n * considering `null` value greater than any other value.\n *\n * @sample
samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T : Any>
nullsLast(comparator: Comparator<in T>): Comparator<T?> =\n    Comparator { a, b ->\n        when {\n            a
=== b -> 0\n            a == null -> 1\n            b == null -> -1\n            else -> comparator.compare(a, b)\n        }\n    }\n\n/**\n * Provides a comparator of nullable [Comparable] values\n * considering `null` value greater than any
other value.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastComparator\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T : Comparable<T>> nullsLast(): Comparator<T?> =
nullsLast(naturalOrder())\n\n/**\n * Returns a comparator that compares [Comparable] objects in natural order.\n *\n * @sample samples.comparisons.Comparisons.naturalOrderComparator\n */\npublic fun <T : Comparable<T>>
naturalOrder(): Comparator<T> = @Suppress("UNCHECKED_CAST") (NaturalOrderComparator as
Comparator<T>)\n\n/**\n * Returns a comparator that compares [Comparable] objects in reversed natural order.\n *\n * @sample samples.comparisons.Comparisons.nullsFirstLastWithComparator\n */\npublic fun <T :
Comparable<T>> reverseOrder(): Comparator<T> = @Suppress("UNCHECKED_CAST")
(ReverseOrderComparator as Comparator<T>)\n\n/**\n * Returns a comparator that imposes the reverse ordering
of this comparator.\n *\n * @sample samples.comparisons.Comparisons.reversed\n */\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\npublic fun <T> Comparator<T>.reversed():
Comparator<T> = when (this) {\n    is ReversedComparator -> this.comparator\n    NaturalOrderComparator ->
@Suppress("UNCHECKED_CAST") (ReverseOrderComparator as Comparator<T>)\n    ReverseOrderComparator -> @Suppress("UNCHECKED_CAST") (NaturalOrderComparator as
Comparator<T>)\n    else -> ReversedComparator(this)\n}\n\nprivate class ReversedComparator<T>(public val
comparator: Comparator<T>) : Comparator<T> {\n    override fun compare(a: T, b: T): Int = comparator.compare(b,
a)\n    @Suppress("VIRTUAL_MEMBER_HIDDEN")\n    fun reversed(): Comparator<T> =
comparator\n}\n\nprivate object NaturalOrderComparator : Comparator<Comparable<Any>> {\n    override fun
compare(a: Comparable<Any>, b: Comparable<Any>): Int = a.compareTo(b)\n    @Suppress("VIRTUAL_MEMBER_HIDDEN")\n    fun reversed(): Comparator<Comparable<Any>> =
ReverseOrderComparator\n}\n\nprivate object ReverseOrderComparator : Comparator<Comparable<Any>> {\n
override fun compare(a: Comparable<Any>, b: Comparable<Any>): Int = b.compareTo(a)\n    @Suppress("VIRTUAL_MEMBER_HIDDEN")\n    fun reversed(): Comparator<Comparable<Any>> =
NaturalOrderComparator\n}\n\n"/>\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StandardKt")\n\npackage kotlin\n\nimport
kotlin.contracts.*\n\n/**\n * An exception is thrown to indicate that a method body remains to be implemented.\n */\npublic class NotImplementedError(message: String = "An operation is not implemented.") :
Error(message)\n\n/**\n * Always throws [NotImplementedError] stating that operation is not implemented.\n */\n@kotlin.internal.InlineOnly\npublic inline fun TODO(): Nothing = throw NotImplementedError()\n\n/**\n */

```

Always throws [NotImplementedError] stating that operation is not implemented.

```

    @param reason a string explaining why the implementation is missing.
    @kotlin.internal.InlineOnly
    public inline fun TODO(reason: String): Nothing = throw NotImplementedError("An operation is not implemented: $reason")

```

Calls the specified function [block] and returns its result.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#run).

```

    @kotlin.internal.InlineOnly
    public inline fun <R> run(block: () -> R): R {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        return block()
    }

```

Calls the specified function [block] with `this` value as its receiver and returns its result.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#run).

```

    @kotlin.internal.InlineOnly
    public inline fun <T, R> T.run(block: T.() -> R): R {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        return block()
    }

```

Calls the specified function [block] with the given [receiver] as its receiver and returns its result.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#with).

```

    @kotlin.internal.InlineOnly
    public inline fun <T, R> with(receiver: T, block: T.() -> R): R {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        return receiver.block()
    }

```

Calls the specified function [block] with `this` value as its receiver and returns `this` value.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#apply).

```

    @kotlin.internal.InlineOnly
    public inline fun <T> T.apply(block: T.() -> Unit): T {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        block()
        return this
    }

```

Calls the specified function [block] with `this` value as its argument and returns `this` value.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#also).

```

    @kotlin.internal.InlineOnly
    @SinceKotlin("1.1")
    public inline fun <T> T.also(block: (T) -> Unit): T {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        block(this)
        return this
    }

```

Calls the specified function [block] with `this` value as its argument and returns its result.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#let).

```

    @kotlin.internal.InlineOnly
    public inline fun <T, R> T.let(block: (T) -> R): R {
        contract {
            callsInPlace(block, InvocationKind.EXACTLY_ONCE)
        }
        return block(this)
    }

```

Returns `this` value if it satisfies the given [predicate] or `null`, if it doesn't.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#takeif-and-takeunless).

```

    @kotlin.internal.InlineOnly
    @SinceKotlin("1.1")
    public inline fun <T> T.takeIf(predicate: (T) -> Boolean): T? {
        contract {
            callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)
        }
        return if (predicate(this)) this else null
    }

```

Returns `this` value if it does not satisfy the given [predicate] or `null`, if it does.

For detailed usage information see the documentation for [scope functions](https://kotlinlang.org/docs/reference/scope-functions.html#takeif-and-takeunless).

```

    @kotlin.internal.InlineOnly
    @SinceKotlin("1.1")
    public inline fun <T> T.takeUnless(predicate: (T) -> Boolean): T? {
        contract {
            callsInPlace(predicate, InvocationKind.EXACTLY_ONCE)
        }
        return if (!predicate(this)) this else null
    }

```

Executes the given function [action] specified number of [times].

A zero-based index of current iteration is passed as a parameter to [action].

@sample

```

    samples.misc.ControlFlow.repeat
    @kotlin.internal.InlineOnly
    public inline fun repeat(times: Int, action: (Int) -> Unit) {
        contract {
            callsInPlace(action)
        }
        for (index in 0 until times) {
            action(index)
        }
    }

```

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```

    @package kotlin.comparisons
    @NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt
    See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib
    import kotlin.js

```

Returns the greater of two values.

If values are equal, returns the first one.

```

    @SinceKotlin("1.1")
    public actual fun <T : Comparable<T>> maxOf(a: T, b: T): T {
        return if (a >= b) a

```

```

else b\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Byte, b: Byte): Byte {\n
return maxOf(a.toInt(), b.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Short, b: Short): Short
{\n
return maxOf(a.toInt(), b.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Int, b: Int): Int {\n
return JsMath.max(a, b)\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.1")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun maxOf(a: Long, b:
Long): Long {\n
return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n * \n * If either value
is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun
maxOf(a: Float, b: Float): Float {\n
return JsMath.max(a, b)\n}\n\n/**\n * Returns the greater of two values.\n * \n * If either value is `NaN`,
returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual
inline fun maxOf(a: Double, b: Double): Double {\n
return JsMath.max(a, b)\n}\n\n/**\n * Returns the greater of
three values.\n * \n * If there are multiple equal maximal values, returns the first of them.\n
*\n@SinceKotlin("1.1")\npublic actual fun <T : Comparable<T>> maxOf(a: T, b: T, c: T): T {\n
return
maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Byte, b: Byte, c: Byte):
Byte {\n
return JsMath.max(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the greater of
three values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Short, b:
Short, c: Short): Short {\n
return JsMath.max(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Short>()\n}\n\n/**\n *
Returns the greater of three values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline
fun maxOf(a: Int, b: Int, c: Int): Int {\n
return JsMath.max(a, b, c)\n}\n\n/**\n * Returns the greater of three
values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Long, b: Long,
c: Long): Long {\n
return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n * \n * If any
value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun
maxOf(a: Float, b: Float, c: Float): Float {\n
return JsMath.max(a, b, c)\n}\n\n/**\n * Returns the greater of three
values.\n * \n * If any value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun maxOf(a: Double, b: Double, c:
Double): Double {\n
return JsMath.max(a, b, c)\n}\n\n/**\n * Returns the greater of the given values.\n * \n * If
there are multiple equal maximal values, returns the first of them.\n
*\n@SinceKotlin("1.4")\npublic actual fun <T
: Comparable<T>> maxOf(a: T, vararg other: T): T {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return max\n}\n\n/**\n * Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic actual fun
maxOf(a: Byte, vararg other: Byte): Byte {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return
max\n}\n\n/**\n * Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic actual fun maxOf(a:
Short, vararg other: Short): Short {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return
max\n}\n\n/**\n * Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic actual fun maxOf(a:
Int, vararg other: Int): Int {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return max\n}\n\n/**\n *
Returns the greater of the given values.\n
*\n@SinceKotlin("1.4")\npublic actual fun maxOf(a: Long, vararg
other: Long): Long {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return max\n}\n\n/**\n *
Returns the greater of the given values.\n * \n * If any value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic actual fun maxOf(a: Float, vararg other: Float): Float {\n
var max = a\n
for (e
in other) max = maxOf(max, e)\n
return max\n}\n\n/**\n * Returns the greater of the given values.\n * \n * If any
value is `NaN`, returns `NaN`.\n
*\n@SinceKotlin("1.4")\npublic actual fun maxOf(a: Double, vararg other:
Double): Double {\n
var max = a\n
for (e in other) max = maxOf(max, e)\n
return max\n}\n\n/**\n * Returns
the smaller of two values.\n * \n * If values are equal, returns the first one.\n
*\n@SinceKotlin("1.1")\npublic
actual fun <T : Comparable<T>> minOf(a: T, b: T): T {\n
return if (a <= b) a else b\n}\n\n/**\n * Returns the
smaller of two values.\n
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a:
Byte, b: Byte): Byte {\n
return minOf(a.toInt(), b.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the smaller of

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two values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Short, b: Short): Short {\n    return minOf(a.toInt(), b.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the smaller of two values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Int, b: Int): Int {\n    return JsMath.min(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n *\n@SinceKotlin("1.1")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun minOf(a: Long, b: Long): Long {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Float, b: Float): Float {\n    return JsMath.min(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n *\n * If either value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Double, b: Double): Double {\n    return JsMath.min(a, b)\n}\n\n/**\n * Returns the smaller of three values.\n *\n * If there are multiple equal minimal values, returns the first of them.\n *\n@SinceKotlin("1.1")\npublic actual fun <T : Comparable<T>> minOf(a: T, b: T, c: T): T {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the smaller of three values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Byte, b: Byte, c: Byte): Byte {\n    return JsMath.min(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Byte>()\n}\n\n/**\n * Returns the smaller of three values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Short, b: Short, c: Short): Short {\n    return JsMath.min(a.toInt(), b.toInt(), c.toInt()).unsafeCast<Short>()\n}\n\n/**\n * Returns the smaller of three values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Int, b: Int, c: Int): Int {\n    return JsMath.min(a, b, c)\n}\n\n/**\n * Returns the smaller of three values.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Long, b: Long, c: Long): Long {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns the smaller of three values.\n *\n * If any value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Float, b: Float, c: Float): Float {\n    return JsMath.min(a, b, c)\n}\n\n/**\n * Returns the smaller of three values.\n *\n * If any value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic actual inline fun minOf(a: Double, b: Double, c: Double): Double {\n    return JsMath.min(a, b, c)\n}\n\n/**\n * Returns the smaller of the given values.\n *\n * If there are multiple equal minimal values, returns the first of them.\n *\n@SinceKotlin("1.4")\npublic actual fun <T : Comparable<T>> minOf(a: T, vararg other: T): T {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Byte, vararg other: Byte): Byte {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Short, vararg other: Short): Short {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Int, vararg other: Int): Int {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Long, vararg other: Long): Long {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n * If any value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Float, vararg other: Float): Float {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller of the given values.\n *\n * If any value is `NaN`, returns `NaN`.\n *\n@SinceKotlin("1.4")\npublic actual fun minOf(a: Double, vararg other: Double): Double {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@npackage kotlin\n\nimport kotlin.experimental.*\nimport kotlin.jvm.*\n\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@JvmInline\npublic value class ULong @PublishedApi internal constructor(@PublishedApi internal val data: Long) : Comparable<ULong> {\n    companion object {\n        /**\n         * A constant holding the minimum value an instance of ULong can have.\n         *\n         * public const val MIN_VALUE: ULong = ULong(0)\n         */

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* A constant holding the maximum value an instance of ULong can have.\n    *\n    public const val
MAX_VALUE: ULong = ULong(-1)\n    /**\n    * The number of bytes used to represent an instance of
ULong in a binary form.\n    *\n    public const val SIZE_BYTES: Int = 8\n    /**\n    * The number of
bits used to represent an instance of ULong in a binary form.\n    *\n    public const val SIZE_BITS: Int = 64\n
}\n    /**\n    * Compares this value with the specified value for order.\n    * Returns zero if this value is equal to
the specified other value, a negative number if it's less than other,\n    * or a positive number if it's greater than
other.\n    *\n    @kotlin.internal.InlineOnly\n    public inline operator fun compareTo(other: UByte): Int =
this.compareTo(other.toULong())\n    /**\n    * Compares this value with the specified value for order.\n    *
Returns zero if this value is equal to the specified other value, a negative number if it's less than other,\n    * or a
positive number if it's greater than other.\n    *\n    @kotlin.internal.InlineOnly\n    public inline operator fun
compareTo(other: UShort): Int = this.compareTo(other.toULong())\n    /**\n    * Compares this value with the
specified value for order.\n    * Returns zero if this value is equal to the specified other value, a negative number if
it's less than other,\n    * or a positive number if it's greater than other.\n    *\n    @kotlin.internal.InlineOnly\n
public inline operator fun compareTo(other: UInt): Int = this.compareTo(other.toULong())\n    /**\n    *
Compares this value with the specified value for order.\n    * Returns zero if this value is equal to the specified other
value, a negative number if it's less than other,\n    * or a positive number if it's greater than other.\n    *\n    @kotlin.internal.InlineOnly\n
    @Suppress("OVERRIDE_BY_INLINE")\n    public override inline operator fun
compareTo(other: ULong): Int = ulongCompare(this.data, other.data)\n    /** Adds the other value to this value.
*\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UByte): ULong =
this.plus(other.toULong())\n    /** Adds the other value to this value. *\n    @kotlin.internal.InlineOnly\n    public
inline operator fun plus(other: UShort): ULong = this.plus(other.toULong())\n    /** Adds the other value to this
value. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun plus(other: UInt): ULong =
this.plus(other.toULong())\n    /** Adds the other value to this value. *\n    @kotlin.internal.InlineOnly\n    public
inline operator fun plus(other: ULong): ULong = ULong(this.data.plus(other.data))\n    /** Subtracts the other
value from this value. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UByte): ULong
= this.minus(other.toULong())\n    /** Subtracts the other value from this value. *\n    @kotlin.internal.InlineOnly\n
public inline operator fun minus(other: UShort): ULong = this.minus(other.toULong())\n    /** Subtracts the other
value from this value. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun minus(other: UInt): ULong =
this.minus(other.toULong())\n    /** Subtracts the other value from this value. *\n    @kotlin.internal.InlineOnly\n
public inline operator fun minus(other: ULong): ULong = ULong(this.data.minus(other.data))\n    /** Multiplies
this value by the other value. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: UByte):
ULong = this.times(other.toULong())\n    /** Multiplies this value by the other value. *\n    @kotlin.internal.InlineOnly\n
public inline operator fun times(other: UShort): ULong =
this.times(other.toULong())\n    /** Multiplies this value by the other value. *\n    @kotlin.internal.InlineOnly\n
public inline operator fun times(other: UInt): ULong = this.times(other.toULong())\n    /** Multiplies this value by
the other value. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun times(other: ULong): ULong =
ULong(this.data.times(other.data))\n    /** Divides this value by the other value, truncating the result to an integer
that is closer to zero. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UByte): ULong =
this.div(other.toULong())\n    /** Divides this value by the other value, truncating the result to an integer that is
closer to zero. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UShort): ULong =
this.div(other.toULong())\n    /** Divides this value by the other value, truncating the result to an integer that is
closer to zero. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: UInt): ULong =
this.div(other.toULong())\n    /** Divides this value by the other value, truncating the result to an integer that is
closer to zero. *\n    @kotlin.internal.InlineOnly\n    public inline operator fun div(other: ULong): ULong =
ulongDivide(this, other)\n    /**\n    * Calculates the remainder of truncating division of this value by the other
value.\n    * \n    * The result is always less than the divisor.\n    *\n    @kotlin.internal.InlineOnly\n    public
inline operator fun rem(other: UByte): ULong = this.rem(other.toULong())\n    /**\n    * Calculates the remainder
of truncating division of this value by the other value.\n    * \n    * The result is always less than the divisor.\n

```

```

*  

@kotlin.internal.InlineOnly  

public inline operator fun rem(other: UShort): ULong =  

this.rem(other.toULong())  

/**  

 * Calculates the remainder of truncating division of this value by the other  

value.  

 *  

 * The result is always less than the divisor.  

*/  

@kotlin.internal.InlineOnly  

public  

inline operator fun rem(other: UInt): ULong = this.rem(other.toULong())  

/**  

 * Calculates the remainder of  

truncating division of this value by the other value.  

 *  

 * The result is always less than the divisor.  

*/  

@kotlin.internal.InlineOnly  

public inline operator fun rem(other: ULong): ULong = ulongRemainder(this,  

other)  

/**  

 * Divides this value by the other value, flooring the result to an integer that is closer to negative  

infinity.  

 *  

 * For unsigned types, the results of flooring division and truncating division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun floorDiv(other: UByte): ULong =  

this.floorDiv(other.toULong())  

/**  

 * Divides this value by the other value, flooring the result to an integer  

that is closer to negative infinity.  

 *  

 * For unsigned types, the results of flooring division and truncating  

division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun floorDiv(other: UShort): ULong  

= this.floorDiv(other.toULong())  

/**  

 * Divides this value by the other value, flooring the result to an integer  

that is closer to negative infinity.  

 *  

 * For unsigned types, the results of flooring division and truncating  

division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun floorDiv(other: UInt): ULong =  

this.floorDiv(other.toULong())  

/**  

 * Divides this value by the other value, flooring the result to an integer  

that is closer to negative infinity.  

 *  

 * For unsigned types, the results of flooring division and truncating  

division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun floorDiv(other: ULong): ULong =  

div(other)  

/**  

 * Calculates the remainder of flooring division of this value by the other value.  

 *  

 * The result is always less than the divisor.  

 *  

 * For unsigned types, the remainders of flooring division and  

truncating division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun mod(other: UByte):  

UByte = this.mod(other.toULong()).toUByte()  

/**  

 * Calculates the remainder of flooring division of this  

value by the other value.  

 *  

 * The result is always less than the divisor.  

 *  

 * For unsigned types, the remainders of flooring division and truncating  

division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun mod(other: UShort): UShort = this.mod(other.toULong()).toUShort()  

/**  

 * Calculates the  

remainder of flooring division of this value by the other value.  

 *  

 * The result is always less than the  

divisor.  

 *  

 * For unsigned types, the remainders of flooring division and truncating  

division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline fun mod(other: UInt): UInt =  

this.mod(other.toULong()).toUInt()  

/**  

 * Calculates the remainder of flooring division of this value by the  

other value.  

 *  

 * The result is always less than the divisor.  

 *  

 * For unsigned types, the remainders  

of flooring division and truncating division are the same.  

*/  

@kotlin.internal.InlineOnly  

public inline  

fun mod(other: ULong): ULong = rem(other)  

/**  

 * Returns this value incremented by one.  

*/  

@sample samples.misc.Builtins.inc  

*/  

@kotlin.internal.InlineOnly  

public inline operator fun inc():  

ULong = ULong(data.inc())  

/**  

 * Returns this value decremented by one.  

*/  

@sample  

samples.misc.Builtins.dec  

*/  

@kotlin.internal.InlineOnly  

public inline operator fun dec(): ULong =  

ULong(data.dec())  

/**  

 * Creates a range from this value to the specified [other] value.  

*/  

@kotlin.internal.InlineOnly  

public inline operator fun rangeTo(other: ULong): ULongRange =  

ULongRange(this, other)  

/**  

 * Shifts this value left by the [bitCount] number of bits.  

 *  

 * Note  

that only the six lowest-order bits of the [bitCount] are used as the shift distance.  

 *  

 * The shift distance actually  

used is therefore always in the range `0..63`.  

*/  

@kotlin.internal.InlineOnly  

public inline infix fun  

shl(bitCount: Int): ULong = ULong(data shl bitCount)  

/**  

 * Shifts this value right by the [bitCount]  

number of bits, filling the leftmost bits with zeros.  

 *  

 * Note that only the six lowest-order bits of the  

[bitCount] are used as the shift distance.  

 *  

 * The shift distance actually used is therefore always in the range  

`0..63`.  

*/  

@kotlin.internal.InlineOnly  

public inline infix fun shr(bitCount: Int): ULong = ULong(data  

ushr bitCount)  

/**  

 * Performs a bitwise AND operation between the two values.  

*/  

@kotlin.internal.InlineOnly  

public inline infix fun and(other: ULong): ULong = ULong(this.data and  

other.data)  

/**  

 * Performs a bitwise OR operation between the two values.  

*/  

@kotlin.internal.InlineOnly  

public inline infix fun or(other: ULong): ULong = ULong(this.data or other.data)  

/**  

 * Performs a bitwise XOR

```

```

operation between the two values. */
@kotlin.internal.InlineOnly
public inline infix fun xor(other: ULong):
ULong = ULong(this.data xor other.data) /** Inverts the bits in this value. */
@kotlin.internal.InlineOnly
public inline fun inv(): ULong = ULong(data.inv()) /**
 * Converts this [ULong] value to [Byte].
 * If this value is less than or equals to [Byte.MAX_VALUE], the resulting `Byte` value represents
 * the same numerical value as this `ULong`.
 * The resulting `Byte` value is represented by the least significant 8 bits
of this `ULong` value.
 * Note that the resulting `Byte` value may be negative. */
@kotlin.internal.InlineOnly
public inline fun toByte(): Byte = data.toByte() /**
 * Converts this [ULong]
value to [Short].
 * If this value is less than or equals to [Short.MAX_VALUE], the resulting `Short` value
represents
 * the same numerical value as this `ULong`.
 * The resulting `Short` value is represented
by the least significant 16 bits of this `ULong` value.
 * Note that the resulting `Short` value may be negative. */
@kotlin.internal.InlineOnly
public inline fun toShort(): Short = data.toShort() /**
 * Converts this
[ULong] value to [Int].
 * If this value is less than or equals to [Int.MAX_VALUE], the resulting `Int`
value represents
 * the same numerical value as this `ULong`.
 * The resulting `Int` value is
represented by the least significant 32 bits of this `ULong` value.
 * Note that the resulting `Int` value may be
negative. */
@kotlin.internal.InlineOnly
public inline fun toInt(): Int = data.toInt() /**
 *
Converts this [ULong] value to [Long].
 * If this value is less than or equals to [Long.MAX_VALUE], the
resulting `Long` value represents
 * the same numerical value as this `ULong`. Otherwise the result is
negative.
 * The resulting `Long` value has the same binary representation as this `ULong` value. */
@kotlin.internal.InlineOnly
public inline fun toLong(): Long = data.toLong() /**
 * Converts this [ULong]
value to [UByte].
 * If this value is less than or equals to [UByte.MAX_VALUE], the resulting `UByte`
value represents
 * the same numerical value as this `ULong`.
 * The resulting `UByte` value is
represented by the least significant 8 bits of this `ULong` value. */
@kotlin.internal.InlineOnly
public
inline fun toUByte(): UByte = data.toUByte() /**
 * Converts this [ULong] value to [UShort].
 * If
this value is less than or equals to [UShort.MAX_VALUE], the resulting `UShort` value represents
 * the same
numerical value as this `ULong`.
 * The resulting `UShort` value is represented by the least significant 16
bits of this `ULong` value. */
@kotlin.internal.InlineOnly
public inline fun toUShort(): UShort =
data.toUShort() /**
 * Converts this [ULong] value to [UInt].
 * If this value is less than or equals
to [UInt.MAX_VALUE], the resulting `UInt` value represents
 * the same numerical value as this `ULong`.
 * The resulting `UInt` value is represented by the least significant 32 bits of this `ULong` value. */
@kotlin.internal.InlineOnly
public inline fun toUInt(): UInt = data.toUInt() /** Returns this value. */
@kotlin.internal.InlineOnly
public inline fun toULong(): ULong = this.toULong() /**
 * Converts this [ULong]
value to [Float].
 * The resulting value is the closest `Float` to this `ULong` value.
 * In case when this
`ULong` value is exactly between two `Float`s,
 * the one with zero at least significant bit of mantissa is
selected. */
@kotlin.internal.InlineOnly
public inline fun toFloat(): Float = this.toDouble().toFloat() /**
 * Converts this [ULong] value to [Double].
 * The resulting value is the closest `Double` to this
`ULong` value.
 * In case when this `ULong` value is exactly between two `Double`s,
 * the one with zero at
least significant bit of mantissa is selected. */
@kotlin.internal.InlineOnly
public inline fun toDouble():
Double = ulongToDouble(data)
public override fun toString(): String = ulongToString(data) /**
 * Converts this [Byte] value to [ULong].
 * If this value is positive, the resulting `ULong` value represents the
same numerical value as this `Byte`.
 * The least significant 8 bits of the resulting `ULong` value are the same
as the bits of this `Byte` value,
 * whereas the most significant 56 bits are filled with the sign bit of this value. */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Byte.toULong(): ULong = ULong(this.toLong()) /**
 * Converts this [Short] value to
[ULong].
 * If this value is positive, the resulting `ULong` value represents the same numerical value as this
`Short`.
 * The least significant 16 bits of the resulting `ULong` value are the same as the bits of this `Short`
value,
 * whereas the most significant 48 bits are filled with the sign bit of this value. */
@SinceKotlin("1.5")
@WasExperimental(ExperimentalUnsignedTypes::class)
@kotlin.internal.InlineOnly
public inline fun Short.toULong(): ULong = ULong(this.toLong()) /**
 * Converts this [Int] value to [ULong]. */

```

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*\n * If this value is positive, the resulting `ULong` value represents the same numerical value as this `Int`. \n *\n *
The least significant 32 bits of the resulting `ULong` value are the same as the bits of this `Int` value, \n *\n * whereas
the most significant 32 bits are filled with the sign bit of this value. \n
*\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Int.toULong(): ULong = ULong(this.toLong())\n **\n * Converts this [Long] value to [ULong]. \n
*\n * If this value is positive, the resulting `ULong` value represents the same numerical value as this `Long`. \n *\n
* The resulting `ULong` value has the same binary representation as this `Long` value. \n
*\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Long.toULong(): ULong = ULong(this)\n **\n * Converts this [Float] value to [ULong]. \n *\n *
The fractional part, if any, is rounded down towards zero. \n * Returns zero if this `Float` value is negative or `NaN`,
[ULong.MAX_VALUE] if it's bigger than `ULong.MAX_VALUE`. \n
*\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Float.toULong(): ULong = doubleToULong(this.toDouble())\n **\n * Converts this [Double]
value to [ULong]. \n *\n * The fractional part, if any, is rounded down towards zero. \n * Returns zero if this
`Double` value is negative or `NaN`, [ULong.MAX_VALUE] if it's bigger than `ULong.MAX_VALUE`. \n
*\n @SinceKotlin("1.5")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n
public inline fun Double.toULong(): ULong = doubleToULong(this)\n **\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file. \n
*\n @file:kotlin.jvm.JvmMultifileClass\n @file:kotlin.jvm.JvmName("CollectionsKt")\n @package
kotlin.collections\n // NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n // See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n // \n import kotlin.random.*\n import
kotlin.ranges.contains\n import kotlin.ranges.reversed\n **\n * Returns 1st *element* from the list. \n *\n *
Throws an [IndexOutOfBoundsException] if the size of this list is less than 1. \n
*\n @kotlin.internal.InlineOnly\n public inline operator fun <T> List<T>.component1(): T {\n     return
get(0)\n }\n **\n * Returns 2nd *element* from the list. \n *\n * Throws an [IndexOutOfBoundsException] if the
size of this list is less than 2. \n *\n @kotlin.internal.InlineOnly\n public inline operator fun <T>
List<T>.component2(): T {\n     return get(1)\n }\n **\n * Returns 3rd *element* from the list. \n *\n * Throws an
[IndexOutOfBoundsException] if the size of this list is less than 3. \n *\n @kotlin.internal.InlineOnly\n public inline
operator fun <T> List<T>.component3(): T {\n     return get(2)\n }\n **\n * Returns 4th *element* from the list. \n
*\n * Throws an [IndexOutOfBoundsException] if the size of this list is less than 4. \n
*\n @kotlin.internal.InlineOnly\n public inline operator fun <T> List<T>.component4(): T {\n     return
get(3)\n }\n **\n * Returns 5th *element* from the list. \n *\n * Throws an [IndexOutOfBoundsException] if the
size of this list is less than 5. \n *\n @kotlin.internal.InlineOnly\n public inline operator fun <T>
List<T>.component5(): T {\n     return get(4)\n }\n **\n * Returns `true` if [element] is found in the collection. \n
*\n @public operator fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.contains(element: T): Boolean {\n     if
(this is Collection)\n         return contains(element)\n         return indexOf(element) >= 0\n }\n **\n * Returns an
element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this
collection. \n *\n * @sample samples.collections.Collections.Elements.elementAt\n *\n @public fun <T>
Iterable<T>.elementAt(index: Int): T {\n     if (this is List)\n         return get(index)\n         return
elementAtOrElse(index) { throw IndexOutOfBoundsException("Collection doesn't contain element at index
$index.") }\n }\n **\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if
the [index] is out of bounds of this list. \n *\n * @sample samples.collections.Collections.Elements.elementAt\n *\n @kotlin.internal.InlineOnly\n public inline fun <T> List<T>.elementAt(index: Int): T {\n     return
get(index)\n }\n **\n * Returns an element at the given [index] or the result of calling the [defaultValue] function
if the [index] is out of bounds of this collection. \n *\n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n *\n @public fun <T>
Iterable<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n     if (this is List)\n         return

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this.getOrElse(index, defaultValue)\n if (index < 0)\n     return defaultValue(index)\n val iterator = iterator()\n var count = 0\n while (iterator.hasNext()) {\n     val element = iterator.next()\n     if (index == count++)\n         return element\n } return defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the\n result of calling the [defaultValue] function if the [index] is out of bounds of this list.\n *\n * @sample\n samples.collections.Collections.Elements.elementAtOrElse\n *\n @kotlin.internal.InlineOnly\n\npublic inline fun\n <T> List<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n     return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the\n [index] is out of bounds of this collection.\n *\n * @sample\n samples.collections.Collections.Elements.elementAtOrNull\n *\n\npublic fun <T>\n Iterable<T>.elementAtOrNull(index: Int): T? {\n     if (this is List)\n         return this.getOrElse(index)\n     if (index < 0)\n         return null\n     val iterator = iterator()\n     var count = 0\n     while (iterator.hasNext()) {\n         val element = iterator.next()\n         if (index == count++)\n             return element\n     } return null\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this list.\n *\n * @sample\n samples.collections.Collections.Elements.elementAtOrNull\n *\n @kotlin.internal.InlineOnly\n\npublic inline fun\n <T> List<T>.elementAtOrNull(index: Int): T? {\n     return this.getOrElse(index)\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n *\n * @sample\n samples.collections.Collections.Elements.find\n *\n @kotlin.internal.InlineOnly\n\npublic inline fun <T>\n Iterable<T>.find(predicate: (T) -> Boolean): T? {\n     return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n *\n * @sample\n samples.collections.Collections.Elements.find\n *\n @kotlin.internal.InlineOnly\n\npublic inline fun <T>\n Iterable<T>.findLast(predicate: (T) -> Boolean): T? {\n     return lastOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n *\n * @sample\n samples.collections.Collections.Elements.find\n *\n @kotlin.internal.InlineOnly\n\npublic inline fun <T>\n List<T>.findLast(predicate: (T) -> Boolean): T? {\n     return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n *\n * @throws [NoSuchElementException] if the collection is empty.\n *\n\npublic fun <T>\n Iterable<T>.first(): T {\n     when (this) {\n         is List -> return this.first()\n         else -> {\n             val iterator = iterator()\n             if (!iterator.hasNext())\n                 throw NoSuchElementException("Collection is empty.")\n             return iterator.next()\n         }\n     }\n}\n\n/**\n * Returns first element.\n *\n * @throws [NoSuchElementException] if the list is empty.\n *\n\npublic fun <T> List<T>.first(): T {\n     if (isEmpty())\n         throw NoSuchElementException("List is empty.")\n     return this[0]\n}\n\n/**\n * Returns the first element matching the given [predicate].\n *\n * @throws [NoSuchElementException] if no such element is found.\n *\n\npublic inline fun <T>\n Iterable<T>.first(predicate: (T) -> Boolean): T {\n     for (element in this) if (predicate(element)) return element\n     throw NoSuchElementException("Collection contains no element matching the predicate.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to elements of this collection in iteration order,\n * or throws [NoSuchElementException] if no non-null value was produced.\n *\n * @sample\n samples.collections.Collections.Transformations.firstNotNullOf\n *\n\n@SinceKotlin("1.5")\n @kotlin.internal.InlineOnly\n\npublic inline fun <T, R : Any>\n Iterable<T>.firstNotNullOf(transform: (T) -> R?): R {\n     return firstNotNullOfOrNull(transform)?: throw\n     NoSuchElementException("No element of the collection was transformed to a non-null value.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to elements of this collection in iteration order,\n * or `null` if no non-null value was produced.\n *\n * @sample\n samples.collections.Collections.Transformations.firstNotNullOf\n *\n\n@SinceKotlin("1.5")\n @kotlin.internal.InlineOnly\n\npublic inline fun <T, R : Any>\n Iterable<T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n     for (element in this) {\n         val result = transform(element)\n         if (result != null) {\n             return result\n         }\n     } return null\n}\n\n/**\n * Returns the first element, or `null` if the collection is empty.\n *\n\npublic fun <T> Iterable<T>.firstOrNull(): T? {\n     when (this) {\n         is List -> {\n             if (isEmpty())\n                 return null\n             else\n                 return this[0]\n         }\n         else -> {\n             val iterator = iterator()\n             if (!iterator.hasNext())\n                 return null\n         }\n     }\n}

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return iterator.next()\n    }\n }\n}\n\n/**\n * Returns the first element, or `null` if the list is empty.\n */\npublic\nfun <T> List<T>.firstOrNull(): T? {\n    return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first element\n matching the given [predicate], or `null` if element was not found.\n */\npublic inline fun <T>\nIterable<T>.firstOrNull(predicate: (T) -> Boolean): T? {\n    for (element in this) if (predicate(element)) return\n element\n    return null\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the\n [defaultValue] function if the [index] is out of bounds of this list.\n */\n@kotlin.internal.InlineOnly\npublic inline\nfun <T> List<T>.getOrNull(index: Int, defaultValue: (Int) -> T): T {\n    return if (index >= 0 && index <= lastIndex) get(index) else\n defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the\n [index] is out of bounds of this list.\n */\n * @sample samples.collections.Collections.Elements.getOrNull\n */\npublic fun <T> List<T>.getOrNull(index: Int): T? {\n    return if (index >= 0 && index <= lastIndex) get(index)\n else null\n}\n\n/**\n * Returns first index of [element], or -1 if the collection does not contain\n element.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Iterable<T>.indexOf(element: T): Int {\n    if (this is List) return\n this.indexOf(element)\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            return index\n        index++\n    }\n    return -1\n}\n\n/**\n * Returns first index of [element], or -1\n if the list does not contain element.\n */\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false\nwarning, extension takes precedence in some cases\npublic fun <@kotlin.internal.OnlyInputTypes T>\nList<T>.indexOf(element: T): Int {\n    return indexOf(element)\n}\n\n/**\n * Returns index of the first element\n matching the given [predicate], or -1 if the collection does not contain\n such element.\n */\npublic inline fun <T>\nIterable<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n            return index\n        index++\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1\n if the list does not contain such element.\n */\npublic inline fun <T> List<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this) {\n        if (predicate(item))\n            return index\n        index++\n    }\n    return -1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1\n if the collection does not contain such\n element.\n */\npublic inline fun <T> Iterable<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    var lastIndex = -1\n    var index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n            lastIndex = index\n        index++\n    }\n    return lastIndex\n}\n\n/**\n * Returns index of the last element matching\n the given [predicate], or -1 if the list does not contain such element.\n */\npublic inline fun <T>\nList<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    val iterator = this.listIterator(size)\n    while\n (iterator.hasPrevious()) {\n        if (predicate(iterator.previous()))\n            return iterator.nextIndex()\n    }\n    return -1\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the collection\n is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n */\npublic fun <T> Iterable<T>.last(): T {\n    when (this) {\n        is List -> return this.last()\n        else -> {\n            val iterator = iterator()\n            if\n (!iterator.hasNext())\n                throw NoSuchElementException("Collection is empty.")\n            var last =\n iterator.next()\n            while (iterator.hasNext())\n                last = iterator.next()\n            return last\n        }\n    }\n}\n\n/**\n * Returns the last element.\n */\n * @throws NoSuchElementException if the list is empty.\n */\n * @sample samples.collections.Collections.Elements.last\n */\npublic fun <T> List<T>.last(): T {\n    if (isEmpty())\n        throw NoSuchElementException("List is empty.")\n    return this[lastIndex]\n}\n\n/**\n * Returns the last\n element matching the given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample samples.collections.Collections.Elements.last\n */\npublic inline fun <T>\nIterable<T>.last(predicate: (T) -> Boolean): T {\n    var last: T? = null\n    var found = false\n    for (element in this)\n        if (predicate(element)) {\n            last = element\n            found = true\n        }\n    if (!found) throw\n NoSuchElementException("Collection contains no element matching the\n predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return last as T\n}\n\n/**\n * Returns the last element matching the\n given [predicate].\n */\n * @throws NoSuchElementException if no such element is found.\n */\n * @sample\n samples.collections.Collections.Elements.last\n */\npublic inline fun <T> List<T>.last(predicate: (T) -> Boolean): T {\n    val iterator = this.listIterator(size)\n    while (iterator.hasPrevious()) {\n        val element = iterator.previous()\n        if (predicate(element)) return element\n    }\n    throw NoSuchElementException("List contains no element

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matching the predicate.\n @Suppress("UNCHECKED_CAST")\n return single as T\n\n/**\n * Returns single element, or `null` if the collection is empty or has more than one element.\n */\npublic fun <T> Iterable<T>.singleOrNull(): T? {\n    when (this) {\n        is List -> return if (size == 1) this[0] else null\n        else -> {\n            val iterator = iterator()\n            if (!iterator.hasNext())\n                return null\n            val single = iterator.next()\n            if (iterator.hasNext())\n                return null\n            return single\n        }\n    }\n}\n\n/**\n * Returns single element, or `null` if the list is empty or has more than one element.\n */\npublic fun <T> List<T>.singleOrNull(): T? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\npublic inline fun <T> Iterable<T>.singleOrNull(predicate: (T) -> Boolean): T? {\n    var single: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Iterable<T>.drop(n: Int): List<T> {\n    require(n >= 0) { "Requested element count $n is less than zero." }\n    if (n == 0) return toList()\n    val list: ArrayList<T>\n    if (this is Collection<*>) {\n        val resultSize = size - n\n        if (resultSize <= 0)\n            return emptyList()\n        if (resultSize == 1)\n            return listOf(last())\n        list = ArrayList<T>(resultSize)\n        if (this is List<T>) {\n            if (this is RandomAccess) {\n                for (index in n until size)\n                    list.add(this[index])\n            } else {\n                for (item in listIterator(n))\n                    list.add(item)\n            }\n            return list\n        }\n    } else {\n        list = ArrayList<T>()\n        var count = 0\n        for (item in this) {\n            if (count >= n) list.add(item) else ++count\n        }\n        return list.optimizeReadOnlyList()\n    }\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> List<T>.dropLast(n: Int): List<T> {\n    require(n >= 0) { "Requested element count $n is less than zero." }\n    return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> List<T>.dropLastWhile(predicate: (T) -> Boolean): List<T> {\n    if (!isEmpty()) {\n        val iterator = listIterator(size)\n        while (iterator.hasPrevious()) {\n            if (!predicate(iterator.previous()))\n                return take(iterator.nextIndex() + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\npublic inline fun <T> Iterable<T>.dropWhile(predicate: (T) -> Boolean): List<T> {\n    var yielding = false\n    val list = ArrayList<T>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n */\npublic inline fun <T> Iterable<T>.filter(predicate: (T) -> Boolean): List<T> {\n    return filterTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n */\npublic inline fun <T> Iterable<T>.filterIndexed(predicate: (index: Int, T) -> Boolean): List<T> {\n    return filterIndexedTo(ArrayList<T>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n * @param [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexedTo\n */\npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n    forEachIndexed { index, element ->\n        if (predicate(index, element)) destination.add(element)\n    }\n    return destination\n}\n\n/**\n * Returns a list containing all elements that are instances of specified type parameter R.\n * \n * @sample samples.collections.Collections.Filtering.filterIsInstance\n */\npublic inline fun <reified R> Iterable<*>.filterIsInstance(): List<@kotlin.internal.NoInfer R> {\n    return

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filterIsInstanceTo(Iterable<R>())\n\n/**\n * Appends all elements that are instances of specified type
parameter R to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterIsInstanceTo\n * \npublic inline fun <reified R, C :
MutableCollection<in R>> Iterable<*>.filterIsInstanceTo(destination: C): C {\n for (element in this) if (element is
R) destination.add(element)\n return destination}\n\n/**\n * Returns a list containing all elements not matching
the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n * \npublic inline fun <T>
Iterable<T>.filterNot(predicate: (T) -> Boolean): List<T> {\n return filterNotTo(Iterable<T>()),
predicate)\n}\n\n/**\n * Returns a list containing all elements that are not `null`.\n * \n * @sample
samples.collections.Collections.Filtering.filterNotNull\n * \npublic fun <T : Any> Iterable<T?>.filterNotNull():
List<T> {\n return filterNotNullTo(Iterable<T?>())}\n\n/**\n * Appends all elements that are not `null` to the
given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterNotNullTo\n * \npublic fun <C
: MutableCollection<in T>, T : Any> Iterable<T?>.filterNotNullTo(destination: C): C {\n for (element in this) if
(element != null) destination.add(element)\n return destination}\n\n/**\n * Appends all elements not matching
the given [predicate] to the given [destination].\n * \n * @sample samples.collections.Collections.Filtering.filterTo\n
* \npublic inline fun <T, C : MutableCollection<in T>> Iterable<T>.filterTo(destination: C, predicate: (T) ->
Boolean): C {\n for (element in this) if (!predicate(element)) destination.add(element)\n return
destination}\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * \n *
@sample samples.collections.Collections.Filtering.filterTo\n * \npublic inline fun <T, C : MutableCollection<in
T>> Iterable<T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n for (element in this) if
(predicate(element)) destination.add(element)\n return destination}\n}\n\n/**\n * Returns a list containing elements
at indices in the specified [indices] range.\n * \npublic fun <T> List<T>.slice(indices: IntRange): List<T> {\n if
(indices.isEmpty()) return listOf()\n return this.subList(indices.start, indices.endInclusive + 1).toList()\n}\n\n/**\n
* Returns a list containing elements at specified [indices].\n * \npublic fun <T> List<T>.slice(indices:
Iterable<Int>): List<T> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n
val list = ArrayList<T>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list}\n\n/**\n *
Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n *
@sample samples.collections.Collections.Transformations.take\n * \npublic fun <T> Iterable<T>.take(n: Int):
List<T> {\n require(n >= 0) { "Requested element count $n is less than zero." }\n if (n == 0) return
emptyList()\n if (this is Collection<T>) {\n if (n >= size) return toList()\n if (n == 1) return
listOf(first())\n }\n var count = 0\n val list = ArrayList<T>(n)\n for (item in this) {\n list.add(item)\n
if (++count == n)\n break\n }\n return list.optimizeReadOnlyList()\n}\n\n/**\n * Returns a list containing
last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample
samples.collections.Collections.Transformations.take\n * \npublic fun <T> List<T>.takeLast(n: Int): List<T> {\n
require(n >= 0) { "Requested element count $n is less than zero." }\n if (n == 0) return emptyList()\n val size =
size\n if (n >= size) return toList()\n if (n == 1) return listOf(last())\n val list = ArrayList<T>(n)\n if (this is
RandomAccess) {\n for (index in size - n until size)\n list.add(this[index])\n } else {\n for (item in
listIterator(size - n))\n list.add(item)\n }\n return list}\n\n/**\n * Returns a list containing last elements
satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n * \npublic
inline fun <T> List<T>.takeLastWhile(predicate: (T) -> Boolean): List<T> {\n if (isEmpty())\n return
emptyList()\n val iterator = listIterator(size)\n while (iterator.hasPrevious()) {\n if
(!predicate(iterator.previous())) {\n iterator.next()\n val expectedSize = size - iterator.nextIndex()\n
if (expectedSize == 0) return emptyList()\n return ArrayList<T>(expectedSize).apply {\n while
(iterator.hasNext())\n add(iterator.next())\n }\n }\n }\n return toList()\n}\n\n/**\n *
Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n * \npublic inline fun <T> Iterable<T>.takeWhile(predicate:
(T) -> Boolean): List<T> {\n val list = ArrayList<T>()\n for (item in this) {\n if (!predicate(item))\n
break\n list.add(item)\n }\n return list}\n\n/**\n * Reverses elements in the list in-place.\n * \npublic
expect fun <T> MutableList<T>.reverse(): Unit\n\n/**\n * Returns a list with elements in reversed order.\n

```

```

*public fun <T> Iterable<T>.reversed(): List<T> {
    if (this is Collection && size <= 1) return toList()
    val list = toMutableList()
    list.reverse()
    return list
}

* Randomly shuffles elements in this list in-place using the specified [random] instance as the source of randomness.
* See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm

*SinceKotlin("1.3")
*public fun <T> MutableList<T>.shuffle(random: Random): Unit {
    for (i in lastIndex downTo 1) {
        val j = random.nextInt(i + 1)
        this[j] = this.set(i, this[j])
    }
}

* Sorts elements in the list in-place according to natural sort order of the value returned by specified [selector] function.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public inline fun <T, R : Comparable<R>> MutableList<T>.sortBy(crossinline selector: (T) -> R?): Unit {
    if (size > 1)
        sortWith(compareBy(selector))
}

* Sorts elements in the list in-place descending according to natural sort order of the value returned by specified [selector] function.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public inline fun <T, R : Comparable<R>> MutableList<T>.sortByDescending(crossinline selector: (T) -> R?): Unit {
    if (size > 1)
        sortWith(compareByDescending(selector))
}

* Sorts elements in the list in-place descending according to their natural sort order.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public fun <T : Comparable<T>> MutableList<T>.sortDescending(): Unit {
    sortWith(reverseOrder())
}

* Returns a list of all elements sorted according to their natural sort order.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public fun <T : Comparable<T>> Iterable<T>.sorted(): List<T> {
    if (this is Collection) {
        if (size <= 1)
            return this.toList()
        @Suppress("UNCHECKED_CAST")
        return (toArray<Comparable<T>>() as Array<T>).apply { sort() }.asList()
    }
    return toMutableList().apply { sort() }
}

* Returns a list of all elements sorted according to natural sort order of the value returned by specified [selector] function.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*sample samples.collections.Collections.Sorting.sortedBy
*public inline fun <T, R : Comparable<R>> Iterable<T>.sortedBy(crossinline selector: (T) -> R?): List<T> {
    return sortedWith(compareBy(selector))
}

* Returns a list of all elements sorted descending according to natural sort order of the value returned by specified [selector] function.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public inline fun <T, R : Comparable<R>> Iterable<T>.sortedByDescending(crossinline selector: (T) -> R?): List<T> {
    return sortedWith(compareByDescending(selector))
}

* Returns a list of all elements sorted descending according to their natural sort order.
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public fun <T : Comparable<T>> Iterable<T>.sortedDescending(): List<T> {
    return sortedWith(reverseOrder())
}

* Returns a list of all elements sorted according to the specified [comparator].
* The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.

*public fun <T> Iterable<T>.sortedWith(comparator: Comparator<in T>): List<T> {
    if (this is Collection) {
        if (size <= 1)
            return this.toList()
        @Suppress("UNCHECKED_CAST")
        return (toArray<Any?>() as Array<T>).apply { sortWith(comparator) }.asList()
    }
    return toMutableList().apply { sortWith(comparator) }
}

* Returns an array of Boolean containing all of the elements of this collection.

*public fun Collection<Boolean>.toBooleanArray(): BooleanArray {
    val result = BooleanArray(size)
    var index = 0
    for (element in this)
        result[index++] = element
    return result
}

* Returns an array of Byte containing all of the elements of this collection.

*public fun Collection<Byte>.toByteArray(): ByteArray {
    val result = ByteArray(size)
    var index = 0
    for (element in this)
        result[index++] = element
    return result
}

* Returns an array of Char containing all of the elements of this collection.

*public fun Collection<Char>.toCharArray(): CharArray {
    val result = CharArray(size)
    var index = 0
    for (element in this)
        result[index++] = element
    return result
}

* Returns an array of Double containing all of the elements of this collection.

*public fun Collection<Double>.toDoubleArray(): DoubleArray {
    val result = DoubleArray(size)
    var index = 0
    for (element in this)
        result[index++] = element
    return result
}

* Returns an array of Float containing

```

```

all of the elements of this collection.\n */\npublic fun Collection<Float>.toFloatArray(): FloatArray {\n    val result
= FloatArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] = element\n    return
result\n}\n\n/**\n * Returns an array of Int containing all of the elements of this collection.\n */\npublic fun
Collection<Int>.toIntArray(): IntArray {\n    val result = IntArray(size)\n    var index = 0\n    for (element in this)\n
        result[index++] = element\n    return result\n}\n\n/**\n * Returns an array of Long containing all of the elements
of this collection.\n */\npublic fun Collection<Long>.toLongArray(): LongArray {\n    val result =
LongArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] = element\n    return
result\n}\n\n/**\n * Returns an array of Short containing all of the elements of this collection.\n */\npublic fun
Collection<Short>.toShortArray(): ShortArray {\n    val result = ShortArray(size)\n    var index = 0\n    for (element
in this)\n        result[index++] = element\n    return result\n}\n\n/**\n * Returns a [Map] containing key-value pairs
provided by [transform] function\n * applied to elements of the given collection.\n * \n * If any of two pairs would
have the same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order
of the original collection.\n * \n * @sample samples.collections.Collections.Transformations.associate\n */\npublic
inline fun <T, K, V> Iterable<T>.associate(transform: (T) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K,
V>(capacity), transform)\n}\n\n/**\n * Returns a [Map] containing the elements from the given collection indexed
by the key\n * returned from [keySelector] function applied to each element.\n * \n * If any two elements would
have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves
the entry iteration order of the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.associateBy\n */\npublic inline fun <T, K>
Iterable<T>.associateBy(keySelector: (T) -> K): Map<K, T> {\n    val capacity =
mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K,
T>(capacity), keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and
indexed by [keySelector] functions applied to elements of the given collection.\n * \n * If any two elements would
have the same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves
the entry iteration order of the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.associateByWithValueTransform\n */\npublic inline fun <T, K, V>
Iterable<T>.associateBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, V> {\n    val capacity =
mapCapacity(collectionSizeOrDefault(10)).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K,
V>(capacity), keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with
key-value pairs,\n * where key is provided by the [keySelector] function applied to each element of the given
collection\n * and value is the element itself.\n * \n * If any two elements would have the same key returned by
[keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateByTo\n */\npublic inline fun <T, K, M : MutableMap<in
K, in T>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K): M {\n    for (element in this) {\n
destination.put(keySelector(element), element)\n    }\n    return destination\n}\n\n/**\n * Populates and returns the
[destination] mutable map with key-value pairs,\n * where key is provided by the [keySelector] function and\n * and
value is provided by the [valueTransform] function applied to elements of the given collection.\n * \n * If any two
elements would have the same key returned by [keySelector] the last one gets added to the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateByToWithValueTransform\n */\npublic inline fun <T, K,
V, M : MutableMap<in K, in V>> Iterable<T>.associateByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n    for (element in this) {\n        destination.put(keySelector(element),
valueTransform(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs\n * provided by [transform] function applied to each element of the given collection.\n *
\n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * @sample
samples.collections.Collections.Transformations.associateTo\n */\npublic inline fun <T, K, V, M : MutableMap<in
K, in V>> Iterable<T>.associateTo(destination: M, transform: (T) -> Pair<K, V>): M {\n    for (element in this) {\n
destination += transform(element)\n    }\n    return destination\n}\n\n/**\n * Returns a [Map] where keys are

```



```

ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIndexedSequence")\n@kotlin.internal.InlineOnly\npubli
c inline fun <T, R> Iterable<T>.flatMapIndexed(transform: (index: Int, T) -> Sequence<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original collection, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIndexedIterableTo")\n@kotlin.internal.InlineOnly\npubli
c inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.flatMapIndexedTo(destination: C, transform: (index:
Int, T) -> Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list =
transform(checkIndexOverflow(index++), element)\n    destination.addAll(list)\n  }\n  return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element\n * and its index in the original collection, to the given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapIndexedSequenceTo")\n@kotlin.internal.InlineOnly\npu
blic inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.flatMapIndexedTo(destination: C, transform:
(index: Int, T) -> Sequence<R>): C {\n  var index = 0\n  for (element in this) {\n    val list =
transform(checkIndexOverflow(index++), element)\n    destination.addAll(list)\n  }\n  return
destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
element of original collection, to the given [destination].\n * \npublic inline fun <T, R, C : MutableCollection<in
R>> Iterable<T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n  for (element in this) {\n    val
list = transform(element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all
elements yielded from results of [transform] function being invoked on each element of original collection, to the
given [destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\flatMapSequenceTo")\npublic inline fun <T, R, C :
MutableCollection<in R>> Iterable<T>.flatMapTo(destination: C, transform: (T) -> Sequence<R>): C {\n  for
(element in this) {\n    val list = transform(element)\n    destination.addAll(list)\n  }\n  return
destination\n}\n\n/**\n * Groups elements of the original collection by the key returned by the given [keySelector]
function\n * applied to each element and returns a map where each group key is associated with a list of
corresponding elements.\n * \n * The returned map preserves the entry iteration order of the keys produced from the
original collection.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n * \npublic inline
fun <T, K> Iterable<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n  return
groupByTo(LinkedHashMap<K, MutableList<T>>(), keySelector)\n}\n\n/**\n * Groups values returned by the
[valueTransform] function applied to each element of the original collection\n * by the key returned by the given
[keySelector] function applied to the element\n * and returns a map where each group key is associated with a list of
corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced from the
original collection.\n * \n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n * \npublic
inline fun <T, K, V> Iterable<T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K,
List<V>> {\n  return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector,
valueTransform)\n}\n\n/**\n * Groups elements of the original collection by the key returned by the given
[keySelector] function\n * applied to each element and puts to the [destination] map each group key associated with
a list of corresponding elements.\n * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n * \npublic inline fun <T, K, M : MutableMap<in K,
MutableList<T>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n  for (element in this) {\n
    val key = keySelector(element)\n    val list = destination.getOrPut(key) { ArrayList<T>() }\n
list.add(element)\n  }\n  return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function
applied to each element of the original collection\n * by the key returned by the given [keySelector] function applied
to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n

```

```

 * \n * @return The [destination] map.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeyAndValues\n * \n public inline fun <T, K, V, M :
MutableMap<in K, MutableList<V>>> Iterable<T>.groupByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list =
destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return
destination}\n}\n\n/**\n * Creates a [Grouping] source from a collection to be used later with one of group-and-fold
operations\n * using the specified [keySelector] function to extract a key from each element.\n * \n * @sample
samples.collections.Grouping.groupingByEachCount\n * \n @SinceKotlin("1.1")\n public inline fun <T, K>
Iterable<T>.groupingBy(crossinline keySelector: (T) -> K): Grouping<T, K> {\n return object : Grouping<T, K>
{\n override fun sourceIterator(): Iterator<T> = this@groupingBy.iterator()\n override fun keyOf(element:
T): K = keySelector(element)\n }\n}\n}\n\n/**\n * Returns a list containing the results of applying the given
[transform] function\n * to each element in the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.map\n * \n public inline fun <T, R> Iterable<T>.map(transform:
(T) -> R): List<R> {\n return mapTo(ArrayList<R>(collectionSizeOrDefault(10)), transform)\n}\n}\n\n/**\n *
Returns a list containing the results of applying the given [transform] function\n * to each element and its index in
the original collection.\n * @param [transform] function that takes the index of an element and the element itself\n *
and returns the result of the transform applied to the element.\n * \n public inline fun <T, R>
Iterable<T>.mapIndexed(transform: (index: Int, T) -> R): List<R> {\n return
mapIndexedTo(ArrayList<R>(collectionSizeOrDefault(10)), transform)\n}\n}\n\n/**\n * Returns a list containing only
the non-null results of applying the given [transform] function\n * to each element and its index in the original
collection.\n * @param [transform] function that takes the index of an element and the element itself\n * and returns
the result of the transform applied to the element.\n * \n public inline fun <T, R : Any>
Iterable<T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): List<R> {\n return
mapIndexedNotNullTo(ArrayList<R>(), transform)\n}\n}\n\n/**\n * Applies the given [transform] function to each
element and its index in the original collection\n * and appends only the non-null results to the given [destination].\n
* @param [transform] function that takes the index of an element and the element itself\n * and returns the result of
the transform applied to the element.\n * \n public inline fun <T, R : Any, C : MutableCollection<in R>>
Iterable<T>.mapIndexedNotNullTo(destination: C, transform: (index: Int, T) -> R?): C {\n forEachIndexed {
index, element -> transform(index, element)?.let { destination.add(it) } }\n return destination}\n}\n}\n\n/**\n *
Applies the given [transform] function to each element and its index in the original collection\n * and appends the
results to the given [destination].\n * @param [transform] function that takes the index of an element and the
element itself\n * and returns the result of the transform applied to the element.\n * \n public inline fun <T, R, C :
MutableCollection<in R>> Iterable<T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {\n var
index = 0\n for (item in this)\n destination.add(transform(checkIndexOverflow(index++), item))\n return
destination}\n}\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform]
function\n * to each element in the original collection.\n * \n * @sample
samples.collections.Collections.Transformations.mapNotNull\n * \n public inline fun <T, R : Any>
Iterable<T>.mapNotNull(transform: (T) -> R?): List<R> {\n return mapNotNullTo(ArrayList<R>(),
transform)\n}\n}\n\n/**\n * Applies the given [transform] function to each element in the original collection\n *
and appends only the non-null results to the given [destination].\n * \n public inline fun <T, R : Any, C :
MutableCollection<in R>> Iterable<T>.mapNotNullTo(destination: C, transform: (T) -> R?): C {\n forEach {
element -> transform(element)?.let { destination.add(it) } }\n return destination}\n}\n}\n\n/**\n * Applies the
given [transform] function to each element of the original collection\n * and appends the results to the given
[destination].\n * \n public inline fun <T, R, C : MutableCollection<in R>> Iterable<T>.mapTo(destination: C,
transform: (T) -> R): C {\n for (item in this)\n destination.add(transform(item))\n return
destination}\n}\n}\n\n/**\n * Returns a lazy [Iterable] that wraps each element of the original collection\n * into an
[IndexValue] containing the index of that element and the element itself.\n * \n public fun <T>
Iterable<T>.withIndex(): Iterable<IndexedValue<T>> {\n return IndexingIterable { iterator() }\n}\n}\n\n/**\n *

```

Returns a list containing only distinct elements from the given collection.

- Among equal elements of the given collection, only the first one will be present in the resulting list.
- The elements in the resulting list are in the same order as they were in the source collection.

@sample

```
samples.collections.Collections.Transformations.distinctAndDistinctBy
```

`public fun <T> Iterable<T>.distinct(): List<T>`

```
{\n    return this.toMutableSet().toList()\n}
```

Returns a list containing only elements from the given collection having distinct keys returned by the given [selector] function.

- Among elements of the given collection with equal keys, only the first one will be present in the resulting list.
- The elements in the resulting list are in the same order as they were in the source collection.

@sample

```
samples.collections.Collections.Transformations.distinctAndDistinctBy
```

`public inline fun <T, K> Iterable<T>.distinctBy(selector: (T) -> K): List<T>`

```
{\n    val set = HashSet<K>()\n    val list = ArrayList<T>()\n    for (e in this) {\n        val key = selector(e)\n        if (set.add(key))\n            list.add(e)\n    }\n    return list\n}
```

Returns a set containing all elements that are contained by both this collection and the specified collection.

The returned set preserves the element iteration order of the original collection.

To get a set containing all elements that are contained at least in one of these collections use [union].

```
public infix fun <T> Iterable<T>.intersect(other: Iterable<T>): Set<T>
```

```
{\n    val set = this.toMutableSet()\n    set.retainAll(other)\n    return set\n}
```

Returns a set containing all elements that are contained by this collection and not contained by the specified collection.

The returned set preserves the element iteration order of the original collection.

```
public infix fun <T> Iterable<T>.subtract(other: Iterable<T>): Set<T>
```

```
{\n    val set = this.toMutableSet()\n    set.removeAll(other)\n    return set\n}
```

Returns a new [MutableSet] containing all distinct elements from the given collection.

The returned set preserves the element iteration order of the original collection.

```
public fun <T> Iterable<T>.toMutableSet(): MutableSet<T>
```

```
{\n    return when (this) {\n        is Collection<T> -> LinkedHashSet(this)\n        else -> toCollection(LinkedHashSet<T>())\n    }\n}
```

Returns a set containing all distinct elements from both collections.

The returned set preserves the element iteration order of the original collection.

Those elements of the [other] collection that are unique are iterated in the end in the order of the [other] collection.

To get a set containing all elements that are contained in both collections use [intersect].

```
public infix fun <T> Iterable<T>.union(other: Iterable<T>): Set<T>
```

```
{\n    val set = this.toMutableSet()\n    set.addAll(other)\n    return set\n}
```

Returns `true` if all elements match the given [predicate].

@sample

```
samples.collections.Collections.Aggregates.all
```

```
public inline fun <T> Iterable<T>.all(predicate: (T) -> Boolean): Boolean
```

```
{\n    if (this is Collection && isEmpty()) return true\n    for (element in this) if (!predicate(element)) return false\n    return true\n}
```

Returns `true` if collection has at least one element.

@sample

```
samples.collections.Collections.Aggregates.any
```

```
public fun <T> Iterable<T>.any(): Boolean
```

```
{\n    if (this is Collection) return !isEmpty()\n    return iterator().hasNext()\n}
```

Returns `true` if at least one element matches the given [predicate].

@sample

```
samples.collections.Collections.Aggregates.anyWithPredicate
```

```
public inline fun <T> Iterable<T>.any(predicate: (T) -> Boolean): Boolean
```

```
{\n    if (this is Collection && isEmpty()) return false\n    for (element in this) if (predicate(element)) return true\n    return false\n}
```

Returns the number of elements in this collection.

```
public fun <T> Iterable<T>.count(): Int
```

```
{\n    if (this is Collection) return size\n    var count = 0\n    for (element in this) checkCountOverflow(++count)\n    return count\n}
```

Returns the number of elements in this collection.

```
@kotlin.internal.InlineOnly
```

```
public inline fun <T> Collection<T>.count(): Int
```

```
{\n    return size\n}
```

Returns the number of elements matching the given [predicate].

```
public inline fun <T> Iterable<T>.count(predicate: (T) -> Boolean): Int
```

```
{\n    if (this is Collection && isEmpty()) return 0\n    var count = 0\n    for (element in this) if (predicate(element)) checkCountOverflow(++count)\n    return count\n}
```

Accumulates value starting with [initial] value and applying [operation] from left to right to current accumulator value and each element.

Returns the specified [initial] value if the collection is empty.

@param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.

```
public inline fun <T, R> Iterable<T>.fold(initial: R, operation: (acc: R, T) -> R): R
```

```
{\n    var accumulator = initial\n    for (element in this) accumulator = operation(accumulator, element)\n    return accumulator\n}
```

Accumulates value starting with [initial] value and applying [operation] from left to

```

right\n * to current accumulator value and each element with its index in the original collection.\n * \n * Returns the
specified [initial] value if the collection is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*/\npublic inline fun <T, R> Iterable<T>.foldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): R {\n  var
index = 0\n  var accumulator = initial\n  for (element in this) accumulator =
operation(checkIndexOverflow(index++), accumulator, element)\n  return accumulator\n}\n\n/**\n * Accumulates
value starting with [initial] value and applying [operation] from right to left\n * to each element and current
accumulator value.\n * \n * Returns the specified [initial] value if the list is empty.\n * \n * @param [operation]
function that takes an element and current accumulator value, and calculates the next accumulator value.\n
*/\npublic inline fun <T, R> List<T>.foldRight(initial: R, operation: (T, acc: R) -> R): R {\n  var accumulator =
initial\n  if (!isEmpty()) {\n    val iterator = listIterator(size)\n    while (iterator.hasPrevious()) {\n
accumulator = operation(iterator.previous(), accumulator)\n    }\n  }\n  return accumulator\n}\n\n/**\n *
Accumulates value starting with [initial] value and applying [operation] from right to left\n * to each element with
its index in the original list and current accumulator value.\n * \n * Returns the specified [initial] value if the list is
empty.\n * \n * @param [operation] function that takes the index of an element, the element itself\n * and current
accumulator value, and calculates the next accumulator value.\n */\npublic inline fun <T, R>
List<T>.foldRightIndexed(initial: R, operation: (index: Int, T, acc: R) -> R): R {\n  var accumulator = initial\n  if
(!isEmpty()) {\n    val iterator = listIterator(size)\n    while (iterator.hasPrevious()) {\n      val index =
iterator.previousIndex()\n      accumulator = operation(index, iterator.previous(), accumulator)\n    }\n  }\n  return accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n
*/\n@kotlin.internal.HidesMembers\npublic inline fun <T> Iterable<T>.forEach(action: (T) -> Unit): Unit {\n  for
(element in this) action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential
index with the element.\n * \n * @param [action] function that takes the index of an element and the element itself\n *
and performs the action on the element.\n */\npublic inline fun <T> Iterable<T>.forEachIndexed(action: (index: Int,
T) -> Unit): Unit {\n  var index = 0\n  for (item in this) action(checkIndexOverflow(index++),
item)\n}\n\n@Deprecated("Use maxOrNull instead.")\nReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Iterable<Double>.max(): Double? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.")\nReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Iterable<Float>.max(): Float? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.")\nReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun <T : Comparable<T>> Iterable<T>.max(): T? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxByOrNull instead.")\nReplaceWith("this.maxByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince = "1.6")\npublic inline fun <T, R : Comparable<R>> Iterable<T>.maxBy(selector: (T) -> R):
T? {\n  return maxByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the largest value of the given
function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Iterable<T>.maxByOrNull(selector: (T) -> R): T? {\n  val iterator = iterator()\n  if
(!iterator.hasNext()) return null\n  var maxElem = iterator.next()\n  if (!iterator.hasNext()) return maxElem\n  var
maxValue = selector(maxElem)\n  do {\n    val e = iterator.next()\n    val v = selector(e)\n    if (maxValue <
v) {\n      maxElem = e\n      maxValue = v\n    }\n  } while (iterator.hasNext())\n  return
maxElem\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to
each element in the collection.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n * \n * @throws NoSuchElementException if the collection is empty.\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOf(selector: (T) -> Double): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var\n    max\n    Value = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        max\n    Value = maxOf(max\n    Value, v)\n    }\n    return max\n    Value\n}\n\n/**\n * Returns the largest value among all\n * values produced by [selector] function\n * applied to each element in the collection.\n * If any of values\n * produced by [selector] function is `NaN`, the returned result is `NaN`.\n * @throws NoSuchElementException\n * if the collection is empty.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOf(selector: (T) -> Float): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var\n    max\n    Value = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        max\n    Value = maxOf(max\n    Value, v)\n    }\n    return max\n    Value\n}\n\n/**\n * Returns the largest value among all\n * values produced by [selector] function\n * applied to each element in the collection.\n * @throws\n * NoSuchElementException\n * if the collection is empty.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\n    Iterable<T>.maxOf(selector: (T) -> R): R {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw\n    NoSuchElementException()\n    var\n    max\n    Value = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v\n        = selector(iterator.next())\n        if (max\n        Value < v) {\n            max\n            Value = v\n        }\n    }\n    return\n    max\n    Value\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to\n * each element in the collection or `null` if there are no elements.\n * If any of values produced by [selector]\n * function is `NaN`, the returned result is `NaN`.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOfOrNull(selector: (T)\n    -> Double): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var\n    max\n    Value =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        max\n    Value =\n    maxOf(max\n    Value, v)\n    }\n    return\n    max\n    Value\n}\n\n/**\n * Returns the largest value among all values produced\n * by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n * If any\n * of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.maxOfOrNull(selector: (T)\n    -> Float): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var\n    max\n    Value =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        max\n    Value =\n    maxOf(max\n    Value, v)\n    }\n    return\n    max\n    Value\n}\n\n/**\n * Returns the largest value among all values produced\n * by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\n    Iterable<T>.maxOfOrNull(selector: (T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return\n    null\n    var\n    max\n    Value = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v =\n        selector(iterator.next())\n        if (max\n        Value < v) {\n            max\n            Value = v\n        }\n    }\n    return\n    max\n    Value\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values\n * produced by [selector] function applied to each element in the collection.\n * @throws\n * NoSuchElementException\n * if the collection is empty.\n */\n\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\n    Iterable<T>.maxOfWith(comparator: Comparator<R>, selector: (T) -> R): R {\n    val iterator = iterator()\n    if\n    (!iterator.hasNext()) throw NoSuchElementException()\n    var\n    max\n    Value = selector(iterator.next())\n    while\n    (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(max\n        Value, v) < 0) {\n
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    maxValue = v\n    }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided
 [comparator]\n * among all values produced by [selector] function applied to each element in the collection or `null`
 if there are no elements.\n
 */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>
Iterable<T>.maxOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    val iterator =
iterator()\n    if (!iterator.hasNext()) return null\n    var maxValue = selector(iterator.next())\n    while
(iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(maxValue, v) < 0) {\n
            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest element or `null` if there are no
 elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n */\n@SinceKotlin("1.4")\npublic fun
Iterable<Double>.maxOrNull(): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var
max = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        max = maxOf(max, e)\n
    }\n    return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n * \n * If any of
 elements is `NaN` returns `NaN`.\n */\n@SinceKotlin("1.4")\npublic fun Iterable<Float>.maxOrNull(): Float? {\n
val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var max = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        max = maxOf(max, e)\n    }\n    return max\n}\n\n/**\n *
Returns the largest element or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\npublic fun <T :
Comparable<T>> Iterable<T>.maxOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n
    var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (max < e) max = e\n
    }\n    return max\n}\n\n@Deprecated("Use maxWithOrNull instead.")\nReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun <T> Iterable<T>.maxWith(comparator: Comparator<in T>): T? {\n    return
maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the largest value according to the
 provided [comparator] or `null` if there are no elements.\n */\n@SinceKotlin("1.4")\npublic fun <T>
Iterable<T>.maxWithOrNull(comparator: Comparator<in T>): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n@Deprecated("Use
minOrNull instead.")\nReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Iterable<Double>.min(): Double?
{\n    return minOrNull()\n}\n\n@Deprecated("Use minOrNull instead.")\nReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Iterable<Float>.min(): Float? {\n    return
minOrNull()\n}\n\n@Deprecated("Use minOrNull instead.")\nReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun <T : Comparable<T>> Iterable<T>.min(): T? {\n    return
minOrNull()\n}\n\n@Deprecated("Use minByOrNull instead.")\nReplaceWith("this.minByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince = "1.6")\npublic inline fun <T, R : Comparable<R>> Iterable<T>.minBy(selector: (T) -> R):
T? {\n    return minByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the smallest value of the
 given function or `null` if there are no elements.\n * \n * @sample
 samples.collections.Collections.Aggregates.minByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Iterable<T>.minByOrNull(selector: (T) -> R): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var minElem = iterator.next()\n    if (!iterator.hasNext()) return minElem\n    var
minValue = selector(minElem)\n    do {\n        val e = iterator.next()\n        val v = selector(e)\n        if (minValue >
v) {\n            minElem = e\n            minValue = v\n        }\n    } while (iterator.hasNext())\n    return
minElem\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
 each element in the collection.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
 is `NaN`.\n * \n * @throws NoSuchElementException if the collection is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.minOf(selector: (T) ->
Double): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the collection.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException
if the collection is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.minOf(selector: (T) ->
Float): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the collection.\n * \n * @throws
NoSuchElementException if the collection is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>
Iterable<T>.minOf(selector: (T) -> R): R {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v
= selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the collection or `null` if there are no elements.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.minOfOrNull(selector: (T)
-> Double): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =
selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =
minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.minOfOrNull(selector: (T)
-> Float): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =
selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =
minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the collection or `null` if there are no elements.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>
Iterable<T>.minOfOrNull(selector: (T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return
null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v =
selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the collection.\n * \n * @throws
NoSuchElementException if the collection is empty.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R> Iterable<T>.minOfWith(comparator:
Comparator<in R>, selector: (T) -> R): R {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw
NoSuchElementException()\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v

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applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original collection.\n \* \n \* Throws an exception if this collection is empty. If the collection can be empty in an expected way,\n \* please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n \* \n \* \n \* @public inline fun <S, T : S> Iterable<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n val iterator = this.iterator()\n if (!iterator.hasNext()) throw UnsupportedOperationException("Empty collection can't be reduced.")\n var index = 1\n var accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n }\n return accumulator\n}\n \* \n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element with its index in the original collection.\n \* \n \* Returns `null` if the collection is empty.\n \* \n \* @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceOrNull\n \* \n \* \n \* @SinceKotlin("1.4")\n \* \n \* @public inline fun <S, T : S> Iterable<T>.reduceIndexedOrNull(operation: (index: Int, acc: S, T) -> S): S? {\n val iterator = this.iterator()\n if (!iterator.hasNext()) return null\n var index = 1\n var accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n }\n return accumulator\n}\n \* \n \* Accumulates value starting with the first element and applying [operation] from left to right\n \* to current accumulator value and each element.\n \* \n \* Returns `null` if the collection is empty.\n \* \n \* @param [operation] function that takes current accumulator value and an element,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceOrNull\n \* \n \* \n \* @SinceKotlin("1.4")\n \* \n \* @WasExperimental(ExperimentalStdlibApi::class)\n \* \n \* @public inline fun <S, T : S> Iterable<T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n val iterator = this.iterator()\n if (!iterator.hasNext()) return null\n var accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n accumulator = operation(accumulator, iterator.next())\n }\n return accumulator\n}\n \* \n \* Accumulates value starting with the last element and applying [operation] from right to left\n \* to each element and current accumulator value.\n \* \n \* Throws an exception if this list is empty. If the list can be empty in an expected way,\n \* please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes an element and current accumulator value,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceRight\n \* \n \* \n \* @public inline fun <S, T : S> List<T>.reduceRight(operation: (T, acc: S) -> S): S {\n val iterator = listIterator(size)\n if (!iterator.hasPrevious())\n throw UnsupportedOperationException("Empty list can't be reduced.")\n var accumulator: S = iterator.previous()\n while (iterator.hasPrevious()) {\n accumulator = operation(iterator.previous(), accumulator)\n }\n return accumulator\n}\n \* \n \* Accumulates value starting with the last element and applying [operation] from right to left\n \* to each element with its index in the original list and current accumulator value.\n \* \n \* Throws an exception if this list is empty. If the list can be empty in an expected way,\n \* please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n \* \n \* @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduceRight\n \* \n \* \n \* @public inline fun <S, T : S> List<T>.reduceRightIndexed(operation: (index: Int, T, acc: S) -> S): S {\n val iterator = listIterator(size)\n if (!iterator.hasPrevious())\n throw UnsupportedOperationException("Empty list can't be reduced.")\n var accumulator: S = iterator.previous()\n while (iterator.hasPrevious()) {\n val index = iterator.previousIndex()\n accumulator = operation(index, iterator.previous(), accumulator)\n }\n return accumulator\n}\n \* \n \* Accumulates value starting with the last element and applying [operation] from right to left\n \* to each element with its index in the original list and current accumulator value.\n \* \n \* Returns `null` if the list is empty.\n \* \n \* @param [operation] function that takes the index of an element, the element itself and current accumulator value,\n \* and calculates the next accumulator value.\n \* \n \* @sample

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samples.collections.Collections.Aggregates.reduceRightOrNull\n *^\\n@SinceKotlin("\\1.4\\")\\npublic inline fun <S,
T : S> List<T>.reduceRightIndexedOrNull(operation: (index: Int, T, acc: S) -> S): S? {\\n  val iterator =
listIterator(size)\\n  if (!iterator.hasPrevious())\\n    return null\\n  var accumulator: S = iterator.previous()\\n
while (iterator.hasPrevious()) {\\n    val index = iterator.previousIndex()\\n    accumulator = operation(index,
iterator.previous(), accumulator)\\n  }\\n  return accumulator\\n}\\n\\n/**\\n * Accumulates value starting with the last
element and applying [operation] from right to left\\n * to each element and current accumulator value.\\n * \\n *
Returns `null` if the list is empty.\\n * \\n * @param [operation] function that takes an element and current
accumulator value,\\n * and calculates the next accumulator value.\\n * \\n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\\n
*^\\n@SinceKotlin("\\1.4\\")\\n@WasExperimental(ExperimentalStdlibApi::class)\\npublic inline fun <S, T : S>
List<T>.reduceRightOrNull(operation: (T, acc: S) -> S): S? {\\n  val iterator = listIterator(size)\\n  if
(!iterator.hasPrevious())\\n    return null\\n  var accumulator: S = iterator.previous()\\n  while
(iterator.hasPrevious()) {\\n    accumulator = operation(iterator.previous(), accumulator)\\n  }\\n  return
accumulator\\n}\\n\\n/**\\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\\n * to each element and current accumulator value that starts with [initial] value.\\n * \\n
* Note that `acc` value passed to [operation] function should not be mutated;\\n * otherwise it would affect the
previous value in resulting list.\\n * \\n * @param [operation] function that takes current accumulator value and an
element, and calculates the next accumulator value.\\n * \\n * @sample
samples.collections.Collections.Aggregates.runningFold\\n *^\\n@SinceKotlin("\\1.4\\")\\npublic inline fun <T, R>
Iterable<T>.runningFold(initial: R, operation: (acc: R, T) -> R): List<R> {\\n  val estimatedSize =
collectionSizeOrDefault(9)\\n  if (estimatedSize == 0) return listOf(initial)\\n  val result =
ArrayList<R>(estimatedSize + 1).apply { add(initial) }\\n  var accumulator = initial\\n  for (element in this) {\\n
accumulator = operation(accumulator, element)\\n  result.add(accumulator)\\n  }\\n  return result\\n}\\n\\n/**\\n *
Returns a list containing successive accumulation values generated by applying [operation] from left to right\\n * to
each element, its index in the original collection and current accumulator value that starts with [initial] value.\\n * \\n
* Note that `acc` value passed to [operation] function should not be mutated;\\n * otherwise it would affect the
previous value in resulting list.\\n * \\n * @param [operation] function that takes the index of an element, current
accumulator value\\n * and the element itself, and calculates the next accumulator value.\\n * \\n * @sample
samples.collections.Collections.Aggregates.runningFold\\n *^\\n@SinceKotlin("\\1.4\\")\\npublic inline fun <T, R>
Iterable<T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {\\n  val estimatedSize
= collectionSizeOrDefault(9)\\n  if (estimatedSize == 0) return listOf(initial)\\n  val result =
ArrayList<R>(estimatedSize + 1).apply { add(initial) }\\n  var index = 0\\n  var accumulator = initial\\n  for
(element in this) {\\n    accumulator = operation(index++, accumulator, element)\\n    result.add(accumulator)\\n
  }\\n  return result\\n}\\n\\n/**\\n * Returns a list containing successive accumulation values generated by applying
[operation] from left to right\\n * to each element and current accumulator value that starts with the first element of
this collection.\\n * \\n * Note that `acc` value passed to [operation] function should not be mutated;\\n * otherwise it
would affect the previous value in resulting list.\\n * \\n * @param [operation] function that takes current accumulator
value and the element, and calculates the next accumulator value.\\n * \\n * @sample
samples.collections.Collections.Aggregates.runningReduce\\n
*^\\n@SinceKotlin("\\1.4\\")\\n@WasExperimental(ExperimentalStdlibApi::class)\\npublic inline fun <S, T : S>
Iterable<T>.runningReduce(operation: (acc: S, T) -> S): List<S> {\\n  val iterator = this.iterator()\\n  if
(!iterator.hasNext()) return emptyList()\\n  var accumulator: S = iterator.next()\\n  val result =
ArrayList<S>(collectionSizeOrDefault(10)).apply { add(accumulator) }\\n  while (iterator.hasNext()) {\\n
accumulator = operation(accumulator, iterator.next())\\n  result.add(accumulator)\\n  }\\n  return
result\\n}\\n\\n/**\\n * Returns a list containing successive accumulation values generated by applying [operation] from
left to right\\n * to each element, its index in the original collection and current accumulator value that starts with the
first element of this collection.\\n * \\n * Note that `acc` value passed to [operation] function should not be mutated;\\n
* otherwise it would affect the previous value in resulting list.\\n * \\n * @param [operation] function that takes the

```

index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

```

@sample samples.collections.Collections.Aggregates.runningReduce
*/n@SinceKotlin("1.4")npublic inline fun <S, T : S> Iterable<T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): List<S> {
    val iterator = this.iterator()
    if (!iterator.hasNext()) return emptyList()
    var accumulator: S = iterator.next()
    val result = ArrayList<S>(collectionSizeOrDefault(10)).apply {
        add(accumulator)
    }
    var index = 1
    while (iterator.hasNext()) {
        accumulator = operation(index++, accumulator, iterator.next())
        result.add(accumulator)
    }
    return result
}
*/n/n/**n * Returns a list containing successive accumulation values generated by applying [operation] from left to rightn * to each element and current accumulator value that starts with [initial] value.n * Note that `acc` value passed to [operation] function should not be mutated;n * otherwise it would affect the previous value in resulting list.n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.n * @sample samples.collections.Collections.Aggregates.scan
*/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)npublic inline fun <T, R> Iterable<T>.scan(initial: R, operation: (acc: R, T) -> R): List<R> {
    return runningFold(initial, operation)
}
*/n/n/**n * Returns a list containing successive accumulation values generated by applying [operation] from left to rightn * to each element, its index in the original collection and current accumulator value that starts with [initial] value.n * Note that `acc` value passed to [operation] function should not be mutated;n * otherwise it would affect the previous value in resulting list.n * @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.n * @sample samples.collections.Collections.Aggregates.scan
*/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)npublic inline fun <T, R> Iterable<T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@Deprecated("Use sumOf instead.")
ReplaceWith("this.sumOf(selector)")n@DeprecatedSinceKotlin(warningSince = "1.5")npublic inline fun <T> Iterable<T>.sumBy(selector: (T) -> Int): Int {
    var sum: Int = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@Deprecated("Use sumOf instead.")
ReplaceWith("this.sumOf(selector)")n@DeprecatedSinceKotlin(warningSince = "1.5")npublic inline fun <T> Iterable<T>.sumByDouble(selector: (T) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolutionByLambdaReturnTypen@kotlin.jvm.JvmName("sumOfDouble")n@kotlin.internal.InlineOnlynpublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> Double): Double {
    var sum: Double = 0.toDouble()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolutionByLambdaReturnTypen@kotlin.jvm.JvmName("sumOfInt")n@kotlin.internal.InlineOnlynpublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> Int): Int {
    var sum: Int = 0.toInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolutionByLambdaReturnTypen@kotlin.jvm.JvmName("sumOfLong")n@kotlin.internal.InlineOnlynpublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> Long): Long {
    var sum: Long = 0.toLong()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}
*/n/n/**n * Returns the sum of all values produced by [selector] function applied to each element in the collection.n */n@SinceKotlin("1.5")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolution

```

```

ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfUInt")\n@WasExperimental(ExperimentalUnsignedType
s::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> UInt): UInt {\n
var sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return
sum}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the
collection.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("\sumOfULong")\n@WasExperimental(ExperimentalUnsignedTy
pes::class)\n@kotlin.internal.InlineOnly\npublic inline fun <T> Iterable<T>.sumOf(selector: (T) -> ULong): ULong
{\n var sum: ULong = 0.toULong()\n for (element in this) {\n sum += selector(element)\n }\n return
sum}\n\n/**\n * Returns an original collection containing all the non-`null` elements, throwing an
[IllegalArgumentException] if there are any `null` elements.\n *\npublic fun <T : Any>
Iterable<T?>.requireNoNulls(): Iterable<T> {\n for (element in this) {\n if (element == null) {\n throw
IllegalArgumentException("\null element found in $this.")\n }\n }\n
@Suppress("\UNCHECKED_CAST")\n return this as Iterable<T>}\n\n/**\n * Returns an original collection
containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n
*\npublic fun <T : Any> List<T?>.requireNoNulls(): List<T> {\n for (element in this) {\n if (element ==
null) {\n throw IllegalArgumentException("\null element found in $this.")\n }\n }\n
@Suppress("\UNCHECKED_CAST")\n return this as List<T>}\n\n/**\n * Splits this collection into a list of
lists each not exceeding the given [size].\n *\n * The last list in the resulting list may have fewer elements than the
given [size].\n *\n * @param size the number of elements to take in each list, must be positive and can be greater
than the number of elements in this collection.\n *\n * @sample
samples.collections.Collections.Transformations.chunked\n *\n@SinceKotlin("1.2")\npublic fun <T>
Iterable<T>.chunked(size: Int): List<List<T>> {\n return windowed(size, size, partialWindows = true)\n}\n\n/**\n
* Splits this collection into several lists each not exceeding the given [size]\n * and applies the given [transform]
function to an each.\n *\n * @return list of results of the [transform] applied to an each list.\n *\n * Note that the
list passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it
or allow it to escape in some way, unless you made a snapshot of it.\n * The last list may have fewer elements than
the given [size].\n *\n * @param size the number of elements to take in each list, must be positive and can be
greater than the number of elements in this collection.\n *\n * @sample samples.text.Strings.chunkedTransform\n
*\n@SinceKotlin("1.2")\npublic fun <T, R> Iterable<T>.chunked(size: Int, transform: (List<T>) -> R): List<R>
{\n return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Returns a list
containing all elements of the original collection without the first occurrence of the given [element].\n *\npublic
operator fun <T> Iterable<T>.minus(element: T): List<T> {\n val result =
ArrayList<T>(collectionSizeOrDefault(10))\n var removed = false\n return this.filterTo(result) { if (!removed
&& it == element) { removed = true; false } else true }\n}\n\n/**\n * Returns a list containing all elements of the
original collection except the elements contained in the given [elements] array.\n *\n * Before Kotlin 1.6, the
[elements] array may have been converted to a [HashSet] to speed up the operation, thus the elements were required
to have\n * a correct and stable implementation of `hashCode()` that didn't change between successive
invocations.\n * On JVM, you can enable this behavior back with the system property
`kotlin.collections.convert_arg_to_set_in_removeAll` set to `true`.\n *\npublic operator fun <T>
Iterable<T>.minus(elements: Array<out T>): List<T> {\n if (elements.isEmpty()) return this.toList()\n val other
= elements.convertToSetForSetOperation()\n return this.filterNot { it in other }\n}\n\n/**\n * Returns a list
containing all elements of the original collection except the elements contained in the given [elements] collection.\n
*\n * Before Kotlin 1.6, the [elements] collection may have been converted to a [HashSet] to speed up the
operation, thus the elements were required to have\n * a correct and stable implementation of `hashCode()` that
didn't change between successive invocations.\n * On JVM, you can enable this behavior back with the system
property `kotlin.collections.convert_arg_to_set_in_removeAll` set to `true`.\n *\npublic operator fun <T>
Iterable<T>.minus(elements: Iterable<T>): List<T> {\n val other =

```



snapshot is a list.

Several last lists may have fewer elements than the given [size].

Both [size] and [step] must be positive and can be greater than the number of elements in this collection.

@param size the number of elements to take in each window

@param step the number of elements to move the window forward by on an each step, by default 1

@param partialWindows controls whether or not to keep partial windows in the end if any,

by default `false` which means partial windows won't be preserved

@sample

```

samples.collections.Sequences.Transformations.takeWindows
^
@SinceKotlin("1.2")
public fun <T>
Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): List<List<T>> {
    checkWindowSizeStep(size, step)
    if (this is RandomAccess && this is List) {
        val thisSize = this.size
        val resultCapacity = thisSize / step + if (thisSize % step == 0) 0 else 1
        val result = ArrayList<List<T>>(resultCapacity)
        var index = 0
        while (index in 0 until thisSize) {
            val windowSize = size.coerceAtMost(thisSize - index)
            if (windowSize < size && !partialWindows) break
            result.add(List(windowSize) { this[it + index] })
            index += step
        }
        return result
    }
    val result = ArrayList<List<T>>()
    windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = false).forEach {
        result.add(it)
    }
    return result
}

```

Returns a list of results of applying the given [transform] function to an each list representing a view over the window of the given [size] sliding along this collection with the given [step].

Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.

You should not store it or allow it to escape in some way, unless you made a snapshot of it.

Several last lists may have fewer elements than the given [size].

Both [size] and [step] must be positive and can be greater than the number of elements in this collection.

@param size the number of elements to take in each window

@param step the number of elements to move the window forward by on an each step, by default 1

@param partialWindows controls whether or not to keep partial windows in the end if any,

by default `false` which means partial windows won't be preserved

@sample

```

samples.collections.Sequences.Transformations.averageWindows
^
@SinceKotlin("1.2")
public fun <T, R>
Iterable<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (List<T>) -> R):
List<R> {
    checkWindowSizeStep(size, step)
    if (this is RandomAccess && this is List) {
        val thisSize = this.size
        val resultCapacity = thisSize / step + if (thisSize % step == 0) 0 else 1
        val result = ArrayList<R>(resultCapacity)
        val window = MovingSubList(this)
        var index = 0
        while (index in 0 until thisSize) {
            val windowSize = size.coerceAtMost(thisSize - index)
            if (!partialWindows && windowSize < size) break
            window.move(index, index + windowSize)
            result.add(transform(window))
            index += step
        }
        return result
    }
    val result = ArrayList<R>()
    windowedIterator(iterator(), size, step, partialWindows, reuseBuffer = true).forEach {
        result.add(transform(it))
    }
    return result
}

```

Returns a list of pairs built from the elements of `this` collection and the [other] array with the same index.

The returned list has length of the shortest collection.

@sample

```

samples.collections.Iterables.Operations.zipIterable
^
public infix fun <T, R> Iterable<T>.zip(other:
Array<out R>): List<Pair<T, R>> {
    return zip(other) { t1, t2 -> t1 to t2 }
}

```

Returns a list of values built from the elements of `this` collection and the [other] array with the same index using the provided [transform] function applied to each pair of elements.

The returned list has length of the shortest collection.

@sample

```

samples.collections.Iterables.Operations.zipIterableWithTransform
^
public inline fun <T, R, V>
Iterable<T>.zip(other: Array<out R>, transform: (a: T, b: R) -> V): List<V> {
    val arraySize = other.size
    val list = ArrayList<V>(minOf(collectionSizeOrDefault(10), arraySize))
    var i = 0
    for (element in this) {
        if (i >= arraySize) break
        list.add(transform(element, other[i++]))
    }
    return list
}

```

Returns a list of pairs built from the elements of `this` collection and [other] collection with the same index.

The returned list has length of the shortest collection.

@sample

```

samples.collections.Iterables.Operations.zipIterable
^
public infix fun <T, R> Iterable<T>.zip(other: Iterable<R>): List<Pair<T, R>> {
    return zip(other) { t1, t2 ->
t1 to t2 }
}

```

Returns a list of values built from the elements of `this` collection and the [other] collection with the same index using the provided [transform] function applied to each pair of elements.

The returned list has length of the shortest collection.

@sample

```

samples.collections.Iterables.Operations.zipIterableWithTransform
^
public inline fun <T, R, V>

```

```

Iterable<T>.zip(other: Iterable<R>, transform: (a: T, b: R) -> V): List<V> {\n  val first = iterator()\n  val second = other.iterator()\n  val list = ArrayList<V>(minOf(collectionSizeOrDefault(10), other.collectionSizeOrDefault(10)))\n  while (first.hasNext() && second.hasNext()) {\n    list.add(transform(first.next(), second.next()))\n  }\n  return list\n}\n\n/**\n * Returns a list of pairs of each two adjacent elements in this collection.\n * \n * The returned list is empty if this collection contains less than two elements.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNext\n */\n@SinceKotlin("1.2")\npublic fun <T> Iterable<T>.zipWithNext(): List<Pair<T, T>> {\n  return zipWithNext { a, b -> a to b }\n}\n\n/**\n * Returns a list containing the results of applying the given [transform] function\n * to an each pair of two adjacent elements in this collection.\n * \n * The returned list is empty if this collection contains less than two elements.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n */\n@SinceKotlin("1.2")\npublic inline fun <T, R> Iterable<T>.zipWithNext(transform: (a: T, b: T) -> R): List<R> {\n  val iterator = iterator()\n  if (!iterator.hasNext()) return emptyList()\n  val result = mutableListOf<R>()\n  var current = iterator.next()\n  while (iterator.hasNext()) {\n    val next = iterator.next()\n    result.add(transform(current, next))\n    current = next\n  }\n  return result\n}\n\n/**\n * Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinTo\n */\npublic fun <T, A : Appendable> Iterable<T>.joinTo(buffer: A, separator: CharSequence = "|", prefix: CharSequence = "\",", postfix: CharSequence = "\",", limit: Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): A {\n  buffer.append(prefix)\n  var count = 0\n  for (element in this) {\n    if (++count > 1) buffer.append(separator)\n    if (limit < 0 || count <= limit) {\n      buffer.appendElement(element, transform)\n    } else break\n  }\n  if (limit >= 0 && count > limit) buffer.append(truncated)\n  buffer.append(postfix)\n  return buffer\n}\n\n/**\n * Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.\n * \n * If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit]\n * elements will be appended, followed by the [truncated] string (which defaults to "...").\n * \n * @sample samples.collections.Collections.Transformations.joinToString\n */\npublic fun <T> Iterable<T>.joinToString(separator: CharSequence = "|", prefix: CharSequence = "\",", postfix: CharSequence = "\",", limit: Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): String {\n  return joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()\n}\n\n/**\n * Returns this collection as an [Iterable].\n * \n * @kotlin.internal.InlineOnly\n */\npublic inline fun <T> Iterable<T>.asIterable(): Iterable<T> {\n  return this\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original collection returning its elements when being iterated.\n * \n * @sample samples.collections.Sequences.Building.sequenceFromCollection\n */\npublic fun <T> Iterable<T>.asSequence(): Sequence<T> {\n  return Sequence { this.iterator() }\n}\n\n/**\n * Returns an average value of elements in the collection.\n * \n * @kotlin.jvm.JvmName("averageOfByte")\n */\npublic fun Iterable<Byte>.average(): Double {\n  var sum: Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    checkCountOverflow(++count)\n  }\n  return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n * \n * @kotlin.jvm.JvmName("averageOfShort")\n */\npublic fun Iterable<Short>.average(): Double {\n  var sum: Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    checkCountOverflow(++count)\n  }\n  return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n * \n * @kotlin.jvm.JvmName("averageOfInt")\n */\npublic fun Iterable<Int>.average(): Double {\n  var sum: Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n    checkCountOverflow(++count)\n  }\n  return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns an average value of elements in the collection.\n * \n * @kotlin.jvm.JvmName("averageOfLong")\n */\npublic fun Iterable<Long>.average(): Double {\n  var sum: Double = 0.0\n  var count: Int = 0\n  for (element in this) {\n    sum += element\n
```

```

checkCountOverflow(++count)\n } \n return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
an average value of elements in the collection.\n */\n@kotlin.jvm.JvmName("averageOfFloat")\npublic fun
Iterable<Float>.average(): Double {\n    var sum: Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n
sum += element\n        checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum /
count\n}\n\n/**\n * Returns an average value of elements in the collection.\n
*/\n@kotlin.jvm.JvmName("averageOfDouble")\npublic fun Iterable<Double>.average(): Double {\n    var sum:
Double = 0.0\n    var count: Int = 0\n    for (element in this) {\n        sum += element\n
checkCountOverflow(++count)\n    }\n    return if (count == 0) Double.NaN else sum / count\n}\n\n/**\n * Returns
the sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfByte")\npublic fun
Iterable<Byte>.sum(): Int {\n    var sum: Int = 0\n    for (element in this) {\n        sum += element\n    }\n
return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*/\n@kotlin.jvm.JvmName("sumOfShort")\npublic fun Iterable<Short>.sum(): Int {\n    var sum: Int = 0\n    for
(element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the
collection.\n */\n@kotlin.jvm.JvmName("sumOfInt")\npublic fun Iterable<Int>.sum(): Int {\n    var sum: Int = 0\n
for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in
the collection.\n */\n@kotlin.jvm.JvmName("sumOfLong")\npublic fun Iterable<Long>.sum(): Long {\n    var
sum: Long = 0L\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the
sum of all elements in the collection.\n */\n@kotlin.jvm.JvmName("sumOfFloat")\npublic fun
Iterable<Float>.sum(): Float {\n    var sum: Float = 0.0f\n    for (element in this) {\n        sum += element\n    }\n
return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*/\n@kotlin.jvm.JvmName("sumOfDouble")\npublic fun Iterable<Double>.sum(): Double {\n    var sum: Double
= 0.0\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n"/\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport
kotlin.comparisons.naturalOrder\nimport kotlin.random.Random\n\n/**\n * Returns the array if it's not `null`, or an
empty array otherwise.\n * @sample samples.collections.Arrays.Usage.arrayOrEmpty\n
*/\n@kotlin.internal.InlineOnly\npublic actual inline fun <T> Array<out T>?.orEmpty(): Array<out T> = this ?:
emptyArray<T>()\n\n/**\n * Returns a *typed* array containing all of the elements of this collection.\n * \n *
Allocates an array of runtime type `T` having its size equal to the size of this collection\n * and populates the array
with the elements of this collection.\n * @sample
samples.collections.Collections.Collections.collectionToTypedArray\n
*/\n@kotlin.internal.InlineOnly\npublic
actual inline fun <T> Collection<T>.toArray(): Array<T> =
copyToArray(this)\n\n@JsName("copyToArray")\n@PublishedApi\ninternal fun <T> copyToArray(collection:
Collection<T>): Array<T> {\n    return if (collection.asDynamic().toArray !== undefined)\n
collection.asDynamic().toArray().unsafeCast<Array<T>>()\n    else\n
copyToArrayImpl(collection).unsafeCast<Array<T>>()\n}\n\n@JsName("copyToArrayImpl")\ninternal actual fun
copyToArrayImpl(collection: Collection<*>): Array<Any?> {\n    val array = emptyArray<Any?>()\n    val iterator
= collection.iterator()\n    while (iterator.hasNext())\n        array.asDynamic().push(iterator.next())\n    return
array\n}\n\n@JsName("copyToExistingArrayImpl")\ninternal actual fun <T> copyToArrayImpl(collection:
Collection<*>, array: Array<T>): Array<T> {\n    if (array.size < collection.size)\n        return
copyToArrayImpl(collection).unsafeCast<Array<T>>()\n    val iterator = collection.iterator()\n    var index = 0\n
while (iterator.hasNext()) {\n        array[index++] = iterator.next().unsafeCast<T>()\n    }\n    if (index < array.size)
{\n        array[index] = null.unsafeCast<T>()\n    }\n    return array\n}\n\n/**\n * Returns an immutable list
containing only the specified object [element].\n */\npublic fun <T> listOf(element: T): List<T> =
arrayListOf(element)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual
inline fun <E> buildListInternal(builderAction: MutableList<E>.() -> Unit): List<E> {\n    return
ArrayList<E>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.Inlin
eOnly\ninternal actual inline fun <E> buildListInternal(capacity: Int, builderAction: MutableList<E>.() -> Unit):

```

```

List<E> {\n  checkBuilderCapacity(capacity)\n  return
ArrayList<E>(capacity).apply(builderAction).build()\n}\n\n/**\n * Returns an immutable set containing only the
specified object [element].\n *\npublic fun <T> setOf(element: T): Set<T> =
hashSetOf(element)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual inline
fun <E> buildSetInternal(builderAction: MutableSet<E>().-> Unit): Set<E> {\n  return
LinkedHashSet<E>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.
InlineOnly\ninternal actual inline fun <E> buildSetInternal(capacity: Int, builderAction: MutableSet<E>().-> Unit):
Set<E> {\n  return LinkedHashSet<E>(capacity).apply(builderAction).build()\n}\n\n/**\n * Returns an
immutable map, mapping only the specified key to the\n * specified value.\n *\npublic fun <K, V> mapOf(pair:
Pair<K, V>): Map<K, V> =
hashMapOf(pair)\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninternal actual inline
fun <K, V> buildMapInternal(builderAction: MutableMap<K, V>().-> Unit): Map<K, V> {\n  return
LinkedHashMap<K,
V>().apply(builderAction).build()\n}\n\n@PublishedApi\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\ninte
rnal actual inline fun <K, V> buildMapInternal(capacity: Int, builderAction: MutableMap<K, V>().-> Unit):
Map<K, V> {\n  return LinkedHashMap<K, V>(capacity).apply(builderAction).build()\n}\n\n/**\n * Fills the
list with the provided [value].\n *\n * Each element in the list gets replaced with the [value].\n
*\n@SinceKotlin("1.2")\npublic actual fun <T> MutableList<T>.fill(value: T): Unit {\n  for (index in
0..lastIndex) {\n    this[index] = value\n  }\n}\n\n/**\n * Randomly shuffles elements in this list.\n *\n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.2")\npublic actual fun <T> MutableList<T>.shuffle(): Unit = shuffle(Random)\n}\n\n/**\n *
Returns a new list with the elements of this list randomly shuffled.\n *\n@SinceKotlin("1.2")\npublic actual fun
<T> Iterable<T>.shuffled(): List<T> = toMutableList().apply { shuffle() }\n}\n\n/**\n * Sorts elements in the list in-
place according to their natural sort order.\n *\n * The sort is _stable_. It means that equal elements preserve their
order relative to each other after sorting.\n *\n * @sample samples.collections.Collections.Sorting.sortMutableList\n
*\npublic actual fun <T : Comparable<T>> MutableList<T>.sort(): Unit {\n  collectionsSort(this,
naturalOrder())\n}\n\n/**\n * Sorts elements in the list in-place according to the order specified with [comparator].\n
*\n * The sort is _stable_. It means that equal elements preserve their order relative to each other after sorting.\n
*\n * @sample samples.collections.Collections.Sorting.sortMutableListWith\n
*\npublic actual fun <T>
MutableList<T>.sortWith(comparator: Comparator<in T>): Unit {\n  collectionsSort(this,
comparator)\n}\n\nprivate fun <T> collectionsSort(list: MutableList<T>, comparator: Comparator<in T>) {\n  if
(list.size <= 1) return\n\n  val array = copyToArray(list)\n  sortArrayWith(array, comparator)\n\n  for (i in 0 until
array.size) {\n    list[i] = array[i]\n  }\n}\n\ninternal actual fun <T> arrayOfNulls(reference: Array<T>, size: Int):
Array<T> {\n  return
arrayOfNulls<Any>(size).unsafeCast<Array<T>>()\n}\n\n@SinceKotlin("1.3")\n@PublishedApi\n@JsName("arrayCopy")\ninternal fun <T> arrayCopy(source: Array<out T>, destination: Array<in T>, destinationOffset: Int,
startIndex: Int, endIndex: Int) {\n  AbstractList.checkRangeIndexes(startIndex, endIndex, source.size)\n  val
rangeSize = endIndex - startIndex\n  AbstractList.checkRangeIndexes(destinationOffset, destinationOffset +
rangeSize, destination.size)\n  if (js("ArrayBuffer").isView(destination) &&
js("ArrayBuffer").isView(source)) {\n    val subrange = source.asDynamic().subarray(startIndex, endIndex)\n
destination.asDynamic().set(subrange, destinationOffset)\n  } else {\n    if (source !== destination ||
destinationOffset <= startIndex) {\n      for (index in 0 until rangeSize) {\n
destination[destinationOffset + index] = source[startIndex + index]\n      }\n    } else {\n      for (index in
rangeSize - 1 downTo 0) {\n        destination[destinationOffset + index] = source[startIndex + index]\n      }\n    }\n  }\n}\n\n// no singleton map implementation in js, return map as
is\n@Suppress("NOTHING_TO_INLINE")\ninternal actual inline fun <K, V> Map<K,
V>.toSingletonMapOrSelf(): Map<K, V> = this\n\n@Suppress("NOTHING_TO_INLINE")\ninternal actual inline
fun <K, V> Map<out K, V>.toSingletonMap(): Map<K, V> =

```



```

*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun maxOf(a: Int, b: Int, c: Int):
Intn/n/**n * Returns the greater of three values.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic
expect inline fun maxOf(a: Long, b: Long, c: Long): Longn/n/**n * Returns the greater of three values.n * n * If
any value is `NaN`, returns `NaN`.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline
fun maxOf(a: Float, b: Float, c: Float): Floatn/n/**n * Returns the greater of three values.n * n * If any value is
`NaN`, returns `NaN`.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun maxOf(a:
Double, b: Double, c: Double): Doublen/n/**n * Returns the greater of three values according to the order
specified by the given [comparator].n * n * If there are multiple equal maximal values, returns the first of them.n
*@SinceKotlin("1.1")public fun <T> maxOf(a: T, b: T, c: T, comparator: Comparator<in T>): T {n return
maxOf(a, maxOf(b, c, comparator), comparator)n/n/**n * Returns the greater of two values according to the
order specified by the given [comparator].n * n * If values are equal, returns the first one.n
*@SinceKotlin("1.1")public fun <T> maxOf(a: T, b: T, comparator: Comparator<in T>): T {n return if
(comparator.compare(a, b) >= 0) a else bn/n/**n * Returns the greater of the given values.n * n * If there are
multiple equal maximal values, returns the first of them.n *@SinceKotlin("1.4")public expect fun <T :
Comparable<T>> maxOf(a: T, vararg other: T): Tn/n/**n * Returns the greater of the given values.n
*@SinceKotlin("1.4")public expect fun maxOf(a: Byte, vararg other: Byte): Byten/n/**n * Returns the
greater of the given values.n *@SinceKotlin("1.4")public expect fun maxOf(a: Short, vararg other: Short):
Shortn/n/**n * Returns the greater of the given values.n *@SinceKotlin("1.4")public expect fun maxOf(a:
Int, vararg other: Int): Intn/n/**n * Returns the greater of the given values.n *@SinceKotlin("1.4")public
expect fun maxOf(a: Long, vararg other: Long): Longn/n/**n * Returns the greater of the given values.n * n * If
any value is `NaN`, returns `NaN`.n *@SinceKotlin("1.4")public expect fun maxOf(a: Float, vararg other:
Float): Floatn/n/**n * Returns the greater of the given values.n * n * If any value is `NaN`, returns `NaN`.n
*@SinceKotlin("1.4")public expect fun maxOf(a: Double, vararg other: Double): Doublen/n/**n * Returns
the greater of the given values according to the order specified by the given [comparator].n * n * If there are
multiple equal maximal values, returns the first of them.n *@SinceKotlin("1.4")public fun <T> maxOf(a: T,
vararg other: T, comparator: Comparator<in T>): T {n var max = an for (e in other) if
(comparator.compare(max, e) < 0) max = en return maxn/n/**n * Returns the smaller of two values.n * n *
If values are equal, returns the first one.n *@SinceKotlin("1.1")public expect fun <T : Comparable<T>>
minOf(a: T, b: T): Tn/n/**n * Returns the smaller of two values.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Byte, b: Byte):
Byten/n/**n * Returns the smaller of two values.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Short, b: Short):
Shortn/n/**n * Returns the smaller of two values.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Int, b: Int): Intn/n/**n
* Returns the smaller of two values.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline
fun minOf(a: Long, b: Long): Longn/n/**n * Returns the smaller of two values.n * n * If either value is `NaN`,
returns `NaN`.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Float,
b: Float): Floatn/n/**n * Returns the smaller of two values.n * n * If either value is `NaN`, returns `NaN`.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Double, b: Double):
Doublen/n/**n * Returns the smaller of three values.n * n * If there are multiple equal minimal values, returns the
first of them.n *@SinceKotlin("1.1")public expect fun <T : Comparable<T>> minOf(a: T, b: T, c: T):
Tn/n/**n * Returns the smaller of three values.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic
expect inline fun minOf(a: Byte, b: Byte, c: Byte): Byten/n/**n * Returns the smaller of three values.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Short, b: Short, c:
Short): Shortn/n/**n * Returns the smaller of three values.n
*@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic expect inline fun minOf(a: Int, b: Int, c: Int):
Intn/n/**n * Returns the smaller of three values.n *@SinceKotlin("1.1")@kotlin.internal.InlineOnlypublic
expect inline fun minOf(a: Long, b: Long, c: Long): Longn/n/**n * Returns the smaller of three values.n * n * If

```



```

@sample samples.collections.Maps.Transformations.flatMap\n * \npublic inline fun <K, V, R> Map<out K,
V>.flatMap(transform: (Map.Entry<K, V>) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each entry of original map.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n
* \n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequence")\npublic inline fun <K, V, R> Map<out K,
V>.flatMap(transform: (Map.Entry<K, V>) -> Sequence<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each
entry of original map, to the given [destination].\n * \npublic inline fun <K, V, R, C : MutableCollection<in R>>
Map<out K, V>.flatMapTo(destination: C, transform: (Map.Entry<K, V>) -> Iterable<R>): C {\n  for (element in
this) {\n    val list = transform(element)\n    destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from results of [transform] function being invoked on each entry of original map, to
the given [destination].\n
* \n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapSequenceTo")\npublic inline fun <K, V, R, C :
MutableCollection<in R>> Map<out K, V>.flatMapTo(destination: C, transform: (Map.Entry<K, V>) ->
Sequence<R>): C {\n  for (element in this) {\n    val list = transform(element)\n    destination.addAll(list)\n
  }\n  return destination\n}\n\n/**\n * Returns a list containing the results of applying the given [transform]
function\n * to each entry in the original map.\n * \n * @sample
samples.collections.Maps.Transformations.mapToList\n * \npublic inline fun <K, V, R> Map<out K,
V>.map(transform: (Map.Entry<K, V>) -> R): List<R> {\n  return mapTo(ArrayList<R>(size),
transform)\n}\n\n/**\n * Returns a list containing only the non-null results of applying the given [transform]
function\n * to each entry in the original map.\n * \n * @sample
samples.collections.Maps.Transformations.mapNotNull\n * \npublic inline fun <K, V, R : Any> Map<out K,
V>.mapNotNull(transform: (Map.Entry<K, V>) -> R?): List<R> {\n  return mapNotNullTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Applies the given [transform] function to each entry in the original map\n * and appends
only the non-null results to the given [destination].\n * \npublic inline fun <K, V, R : Any, C : MutableCollection<in
R>> Map<out K, V>.mapNotNullTo(destination: C, transform: (Map.Entry<K, V>) -> R?): C {\n  forEach {
element -> transform(element)?.let { destination.add(it) } }\n  return destination\n}\n\n/**\n * Applies the given
[transform] function to each entry of the original map\n * and appends the results to the given [destination].\n
* \npublic inline fun <K, V, R, C : MutableCollection<in R>> Map<out K, V>.mapTo(destination: C, transform:
(Map.Entry<K, V>) -> R): C {\n  for (item in this)\n    destination.add(transform(item))\n  return
destination\n}\n\n/**\n * Returns `true` if all entries match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.all\n * \npublic inline fun <K, V> Map<out K, V>.all(predicate:
(Map.Entry<K, V>) -> Boolean): Boolean {\n  if (isEmpty()) return true\n  for (element in this) if
(!predicate(element)) return false\n  return true\n}\n\n/**\n * Returns `true` if map has at least one entry.\n * \n *
@sample samples.collections.Collections.Aggregates.any\n * \npublic fun <K, V> Map<out K, V>.any(): Boolean
{\n  return !isEmpty()\n}\n\n/**\n * Returns `true` if at least one entry matches the given [predicate].\n * \n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\n * \npublic inline fun <K, V> Map<out K,
V>.any(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n  if (isEmpty()) return false\n  for (element in
this) if (predicate(element)) return true\n  return false\n}\n\n/**\n * Returns the number of entries in this map.\n
* \n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.count(): Int {\n  return size\n}\n\n/**\n
* Returns the number of entries matching the given [predicate].\n * \npublic inline fun <K, V> Map<out K,
V>.count(predicate: (Map.Entry<K, V>) -> Boolean): Int {\n  if (isEmpty()) return 0\n  var count = 0\n  for
(element in this) if (predicate(element)) ++count\n  return count\n}\n\n/**\n * Performs the given [action] on each
entry.\n * \n@kotlin.internal.HidesMembers\npublic inline fun <K, V> Map<out K, V>.forEach(action:
(Map.Entry<K, V>) -> Unit): Unit {\n  for (element in this) action(element)\n}\n\n@Deprecated("Use
maxByOrNull instead.", ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince =

```

```

`1.4`, errorSince = `1.5`, hiddenSince = `1.6`)@kotlin.internal.InlineOnly\npublic inline fun <K, V, R :
Comparable<R>> Map<out K, V>.maxBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n  return
maxByOrNull(selector)\n}\n\n/**\n * Returns the first entry yielding the largest value of the given function or `null`
if there are no entries.\n * \n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n
*\n@SinceKotlin(`1.4`)\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out
K, V>.maxByOrNull(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n  return
entries.maxByOrNull(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector]
function\n * applied to each entry in the map.\n * \n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n * \n * @throws NoSuchElementException if the map is empty.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.maxOf(selector:
(Map.Entry<K, V>) -> Double): Double {\n  return entries.maxOf(selector)\n}\n\n/**\n * Returns the largest value
among all values produced by [selector] function\n * applied to each entry in the map.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException
if the map is empty.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.maxOf(selector:
(Map.Entry<K, V>) -> Float): Float {\n  return entries.maxOf(selector)\n}\n\n/**\n * Returns the largest value
among all values produced by [selector] function\n * applied to each entry in the map.\n * \n * @throws
NoSuchElementException if the map is empty.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.maxOf(selector: (Map.Entry<K, V>) -> R): R {\n  return entries.maxOf(selector)\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each entry in the map or `null` if there
are no entries.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> Double): Double? {\n  return
entries.maxOfOrNull(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> Float): Float? {\n  return
entries.maxOfOrNull(selector)\n}\n\n/**\n * Returns the largest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.maxOfOrNull(selector: (Map.Entry<K, V>) -> R): R? {\n  return entries.maxOfOrNull(selector)\n}\n\n/**\n *
Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each entry in the map.\n * \n * @throws NoSuchElementException if the map is empty.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.maxOfWith(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R {\n  return
entries.maxOfWith(comparator, selector)\n}\n\n/**\n * Returns the largest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each entry in the map or `null` if there
are no entries.\n
*\n@SinceKotlin(`1.4`)\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

```

```

ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R? {\n  return
entries.maxOfWithOrNull(comparator, selector)\n}\n\n@Deprecated(\\"Use maxWithOrNull instead.\",
ReplaceWith(\\"this.maxWithOrNull(comparator)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\", errorSince
= \\"1.5\", hiddenSince = \\"1.6\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.maxWith(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n  return
maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first entry having the largest value according to the provided
[comparator] or `null` if there are no entries.\n * ^\n@SinceKotlin(\\"1.4\")\n@kotlin.internal.InlineOnly\npublic
inline fun <K, V> Map<out K, V>.maxWithOrNull(comparator: Comparator<in Map.Entry<K, V>>):
Map.Entry<K, V>? {\n  return entries.maxWithOrNull(comparator)\n}\n\n@Deprecated(\\"Use minByOrNull
instead.\", ReplaceWith(\\"this.minByOrNull(selector)\")\n)\n@DeprecatedSinceKotlin(warningSince = \\"1.4\",
errorSince = \\"1.5\", hiddenSince = \\"1.6\")\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minBy(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n  return minByOrNull(selector)\n}\n\n/**\n * Returns the first entry yielding the smallest value of the given function or `null` if there are no entries.\n * ^\n@sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin(\\"1.4\")\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out
K, V>.minByOrNull(selector: (Map.Entry<K, V>) -> R): Map.Entry<K, V>? {\n  return
entries.minByOrNull(selector)\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each entry in the map.\n * ^\n * If any of values produced by [selector] function is `NaN`, the
returned result is `NaN`.\n * ^\n * @throws NoSuchElementException if the map is empty.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.minOf(selector:
(Map.Entry<K, V>) -> Double): Double {\n  return entries.minOf(selector)\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each entry in the map.\n * ^\n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * ^\n * @throws NoSuchElementException
if the map is empty.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K, V>.minOf(selector:
(Map.Entry<K, V>) -> Float): Float {\n  return entries.minOf(selector)\n}\n\n/**\n * Returns the smallest value
among all values produced by [selector] function\n * applied to each entry in the map.\n * ^\n * @throws
NoSuchElementException if the map is empty.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minOf(selector: (Map.Entry<K, V>) -> R): R {\n  return entries.minOf(selector)\n}\n\n/**\n * Returns the
smallest value among all values produced by [selector] function\n * applied to each entry in the map or `null` if
there are no entries.\n * ^\n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> Double): Double? {\n  return
entries.minOfOrNull(selector)\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n * ^\n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> Float): Float? {\n  return
entries.minOfOrNull(selector)\n}\n\n/**\n * Returns the smallest value among all values produced by [selector]
function\n * applied to each entry in the map or `null` if there are no entries.\n
*\n@SinceKotlin(\\"1.4\")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution

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ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R : Comparable<R>> Map<out K,
V>.minOfOrNull(selector: (Map.Entry<K, V>) -> R): R? {\n    return entries.minOfOrNull(selector)\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each entry in the map.\n * \n * @throws NoSuchElementException if the map is empty.\n
*\n *\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.minOfWith(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R {\n    return
entries.minOfWith(comparator, selector)\n}\n\n/**\n * Returns the smallest value according to the provided
[comparator]\n * among all values produced by [selector] function applied to each entry in the map or `null` if there
are no entries.\n
*\n *\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <K, V, R> Map<out K,
V>.minOfWithOrNull(comparator: Comparator<in R>, selector: (Map.Entry<K, V>) -> R): R? {\n    return
entries.minOfWithOrNull(comparator, selector)\n}\n\n@Deprecated("Use minWithOrNull instead.",
ReplaceWith("this.minWithOrNull(comparator)"))\n @DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\n public fun <K, V> Map<out K, V>.minWith(comparator: Comparator<in
Map.Entry<K, V>>): Map.Entry<K, V>? {\n    return minWithOrNull(comparator)\n}\n\n/**\n * Returns the first
entry having the smallest value according to the provided [comparator] or `null` if there are no entries.\n
*\n *\n @SinceKotlin("1.4")\n @kotlin.internal.InlineOnly\n public inline fun <K, V> Map<out K,
V>.minWithOrNull(comparator: Comparator<in Map.Entry<K, V>>): Map.Entry<K, V>? {\n    return
entries.minWithOrNull(comparator)\n}\n\n/**\n * Returns `true` if the map has no entries.\n * \n * @sample
samples.collections.Collections.Aggregates.none\n *\n @public fun <K, V> Map<out K, V>.none(): Boolean {\n
return isEmpty()\n}\n\n/**\n * Returns `true` if no entries match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n *\n @public inline fun <K, V> Map<out K,
V>.none(predicate: (Map.Entry<K, V>) -> Boolean): Boolean {\n    if (isEmpty()) return true\n    for (element in
this) if (predicate(element)) return false\n    return true\n}\n\n/**\n * Performs the given [action] on each entry and
returns the map itself afterwards.\n *\n @SinceKotlin("1.1")\n @public inline fun <K, V, M : Map<out K, V>>
M.onEach(action: (Map.Entry<K, V>) -> Unit): M {\n    return apply { for (element in this) action(element)
}\n}\n\n/**\n * Performs the given [action] on each entry, providing sequential index with the entry,\n * and returns
the map itself afterwards.\n * @param [action] function that takes the index of an entry and the entry itself\n * and
performs the action on the entry.\n *\n @SinceKotlin("1.4")\n @public inline fun <K, V, M : Map<out K, V>>
M.onEachIndexed(action: (index: Int, Map.Entry<K, V>) -> Unit): M {\n    return apply {
entries.forEachIndexed(action) }\n}\n\n/**\n * Creates an [Iterable] instance that wraps the original map returning
its entries when being iterated.\n *\n @kotlin.internal.InlineOnly\n @public inline fun <K, V> Map<out K,
V>.asIterable(): Iterable<Map.Entry<K, V>> {\n    return entries\n}\n\n/**\n * Creates a [Sequence] instance that
wraps the original map returning its entries when being iterated.\n *\n @public fun <K, V> Map<out K,
V>.asSequence(): Sequence<Map.Entry<K, V>> {\n    return entries.asSequence()\n}\n\n", "/*\n * Copyright 2010-
2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n @npackage kotlin.text\n\n// NOTE:
THIS FILE IS AUTO-GENERATED by the GenerateUnicodeData.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n// 10 mappings totally\n\ninternal fun
Char.titlecaseImpl(): String {\n    val uppercase = uppercase()\n    if (uppercase.length > 1) {\n        return if (this ==
"\u0149") uppercase else uppercase[0] + uppercase.substring(1).lowercase()\n    }\n    return
titlecaseChar().toString()\n}\n\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n @npackage kotlin.text\n\n/**\n * Converts this character to lower case using Unicode
mapping rules of the invariant locale.\n *\n @Deprecated("Use lowercaseChar() instead.",
ReplaceWith("lowercaseChar()"))\n @DeprecatedSinceKotlin(warningSince =

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\`1.5\`)@kotlin.internal.InlineOnly\npublic actual inline fun Char.toLowerCase(): Char =
toLowerCaseChar()\n\n/**\n * Converts this character to lower case using Unicode mapping rules of the invariant
locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many character
mapping use the [toLowerCase] function.\n * If this character has no mapping equivalent, the character itself is
returned.\n * @sample samples.text.Chars.toLowerCase\n
*/\n@SinceKotlin(\`1.5\`)@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.toLowerCaseChar(): Char = lowercase()[0]\n\n/**\n * Converts this character to lower case
using Unicode mapping rules of the invariant locale.\n * This function supports one-to-many character mapping,
thus the length of the returned string can be greater than one.\n * For example, ``\u0130'.toLowerCase()` returns
``\u0069\u0307``,\n * where ``\u0130`` is the LATIN CAPITAL LETTER I WITH DOT ABOVE character
(`\u0130`).\n * If this character has no lower case mapping, the result of `toString()` of this char is returned.\n *
*\n * @sample samples.text.Chars.toLowerCase\n
*/\n@SinceKotlin(\`1.5\`)@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.lowercase(): String = toString().asDynamic().toLowerCase().unsafeCast<String>()\n\n/**\n
 * Converts this character to upper case using Unicode mapping rules of the invariant locale.\n
*/\n@Deprecated("Use uppercaseChar() instead.",
ReplaceWith("uppercaseChar()"))\n@DeprecatedSinceKotlin(warningSince =
\`1.5\`)@kotlin.internal.InlineOnly\npublic actual inline fun Char.toUpperCase(): Char =
uppercaseChar()\n\n/**\n * Converts this character to upper case using Unicode mapping rules of the invariant
locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many character
mapping use the [toUpperCase] function.\n * If this character has no mapping equivalent, the character itself is
returned.\n * @sample samples.text.Chars.toUpperCase\n
*/\n@SinceKotlin(\`1.5\`)@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Char.toUpperCaseChar(): Char {\n    val uppercase = uppercase()\n    return if (uppercase.length > 1) this else
uppercase[0]\n}\n\n/**\n * Converts this character to upper case using Unicode mapping rules of the invariant
locale.\n * This function supports one-to-many character mapping, thus the length of the returned string can be
greater than one.\n * For example, ``\uFB00'.uppercase()` returns ``\u0046\u0046``,\n * where ``\uFB00`` is the
LATIN SMALL LIGATURE FF character (`\uffb00`).\n * If this character has no upper case mapping, the result of
`toString()` of this char is returned.\n * @sample samples.text.Chars.toUpperCase\n
*/\n@SinceKotlin(\`1.5\`)@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Char.uppercase(): String = toString().asDynamic().toUpperCase().unsafeCast<String>()\n\n/**\n
 * Converts this character to title case using Unicode mapping rules of the invariant locale.\n * This function
performs one-to-one character mapping.\n * To support one-to-many character mapping use the [titlecase]
function.\n * If this character has no mapping equivalent, the result of calling [uppercaseChar] is returned.\n *
*\n * @sample samples.text.Chars.titlecase\n
*/\n@SinceKotlin(\`1.5\`)@kotlin.internal.InlineOnly\npublic actual fun Char.titlecaseChar(): Char =
titlecaseCharImpl()\n\n/**\n * Returns `true` if this character is a Unicode high-surrogate code unit (also known as
leading-surrogate code unit).\n */\npublic actual fun Char.isHighSurrogate(): Boolean = this in
Char.MIN_HIGH_SURROGATE..Char.MAX_HIGH_SURROGATE\n\n/**\n * Returns `true` if this character is a
Unicode low-surrogate code unit (also known as trailing-surrogate code unit).\n */\npublic actual fun
Char.isLowSurrogate(): Boolean = this in
Char.MIN_LOW_SURROGATE..Char.MAX_LOW_SURROGATE\n\n/**\n * Returns the Unicode general
category of this character.\n */\n@SinceKotlin(\`1.5\`)@kotlin.internal.InlineOnly\npublic actual val Char.category: CharCategory\n    get() =
CharCategory.valueOf(getCategoryValue())\n\n/**\n * Returns `true` if this character (Unicode code point) is
defined in Unicode.\n * A character is considered to be defined in Unicode if its [category] is not
[CharCategory.UNASSIGNED].\n */\n@SinceKotlin(\`1.5\`)@kotlin.internal.InlineOnly\npublic actual fun Char.isDefined(): Boolean {\n    if
(this < \u0080) {\n        return true\n    }\n    return getCategoryValue() !=
CharCategory.UNASSIGNED.value\n}\n\n/**\n * Returns `true` if this character is a letter.\n * A character is
considered to be a letter if its [category] is [CharCategory.UPPERCASE_LETTER],\n *

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[CharCategory.LOWERCASE_LETTER], [CharCategory.TITLECASE_LETTER],
[CharCategory.MODIFIER_LETTER], or [CharCategory.OTHER_LETTER].\n * \n * @sample
samples.text.Chars.isLetter\n * \n * @SinceKotlin("1.5")\npublic actual fun Char.isLetter(): Boolean {\n if (this in
'a'..'z' || this in 'A'..'Z') {\n return true\n } \n if (this < "\u0080") {\n return false\n } \n return
isLetterImpl()\n}\n\n/**\n * Returns `true` if this character is a letter or digit.\n * \n * @see isLetter\n * @see
isDigit\n * \n * @sample samples.text.Chars.isLetterOrDigit\n * \n * @SinceKotlin("1.5")\npublic actual fun
Char.isLetterOrDigit(): Boolean {\n if (this in 'a'..'z' || this in 'A'..'Z' || this in '0'..'9') {\n return true\n } \n
if (this < "\u0080") {\n return false\n } \n \n return isDigitImpl() || isLetterImpl()\n}\n\n/**\n * Returns `true` if
this character is a digit.\n * \n * A character is considered to be a digit if its [category] is
[CharCategory.DECIMAL_DIGIT_NUMBER].\n * \n * @sample samples.text.Chars.isDigit\n
* \n * @SinceKotlin("1.5")\npublic actual fun Char.isDigit(): Boolean {\n if (this in '0'..'9') {\n return true\n
} \n if (this < "\u0080") {\n return false\n } \n return isDigitImpl()\n}\n\n/**\n * Returns `true` if this
character is upper case.\n * \n * A character is considered to be an upper case character if its [category] is
[CharCategory.UPPERCASE_LETTER],\n * \n * or it has contributory property Other_Uppercase as defined by the
Unicode Standard.\n * \n * @sample samples.text.Chars.isUpperCase\n * \n * @SinceKotlin("1.5")\npublic actual fun
Char.isUpperCase(): Boolean {\n if (this in 'A'..'Z') {\n return true\n } \n if (this < "\u0080") {\n return
false\n } \n return isUpperCaseImpl()\n}\n\n/**\n * Returns `true` if this character is lower case.\n * \n * A
character is considered to be a lower case character if its [category] is [CharCategory.LOWERCASE_LETTER],\n * \n
* or it has contributory property Other_Lowercase as defined by the Unicode Standard.\n * \n * @sample
samples.text.Chars.isLowerCase\n * \n * @SinceKotlin("1.5")\npublic actual fun Char.isLowerCase(): Boolean {\n
if (this in 'a'..'z') {\n return true\n } \n if (this < "\u0080") {\n return false\n } \n return
isLowerCaseImpl()\n}\n\n/**\n * Returns `true` if this character is a title case letter.\n * \n * A character is
considered to be a title case letter if its [category] is [CharCategory.TITLECASE_LETTER].\n * \n * @sample
samples.text.Chars.isTitleCase\n * \n * @SinceKotlin("1.5")\npublic actual fun Char.isTitleCase(): Boolean {\n if
(this < "\u0080") {\n return false\n } \n return getCategoryValue() ==
CharCategory.TITLECASE_LETTER.value\n}\n\n/**\n * Returns `true` if this character is an ISO control
character.\n * \n * A character is considered to be an ISO control character if its [category] is
[CharCategory.CONTROL],\n * \n * meaning the Char is in the range "\u0000..\u001F" or in the range
"\u007F..\u009F".\n * \n * @sample samples.text.Chars.isISOControl\n * \n * @SinceKotlin("1.5")\npublic actual
fun Char.isISOControl(): Boolean {\n return this <= "\u001F" || this in "\u007F..\u009F"\n}\n\n/**\n *
Determines whether a character is whitespace according to the Unicode standard.\n * \n * Returns `true` if the character
is whitespace.\n * \n * @sample samples.text.Chars.isWhitespace\n * \n * \npublic actual fun Char.isWhitespace():
Boolean = isWhitespaceImpl(),"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n * \n * \npackage kotlin.text\nimport kotlin.js.RegExp\n\n/**\n * Converts the characters
in the specified array to a string.\n * \n * @SinceKotlin("1.2")\n * \n * @Deprecated("Use CharArray.concatToString()
instead", ReplaceWith("chars.concatToString()"))\n * \n * @DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5")\npublic actual fun String(chars: CharArray): String {\n var result = ""\n for (char in chars) {\n
result += char\n } \n return result\n}\n\n/**\n * Converts the characters from a portion of the specified array to a
string.\n * \n * @throws IndexOutOfBoundsException if either [offset] or [length] are less than zero\n * or `offset +
length` is out of [chars] array bounds.\n * \n * @SinceKotlin("1.2")\n * \n * @Deprecated("Use
CharArray.concatToString(startIndex, endIndex) instead", ReplaceWith("chars.concatToString(offset, offset +
length)"))\n * \n * @DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5")\npublic actual fun String(chars:
CharArray, offset: Int, length: Int): String {\n if (offset < 0 || length < 0 || chars.size - offset < length)\n
throw IndexOutOfBoundsException("size: ${chars.size}; offset: $offset; length: $length")\n var result = ""\n for
(index in offset until offset + length) {\n result += chars[index]\n } \n return result\n}\n\n/**\n *
Concatenates characters in this [CharArray] into a String.\n
* \n * @SinceKotlin("1.4")\n * \n * @WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun

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CharArray.concatToString(): String {
    var result = ""
    for (char in this) {
        result += char
    }
    return result
}
Concatenates characters in this [CharArray] or its subrange into a String.
@param startIndex the beginning (inclusive) of the subrange of characters, 0 by default.
@param endIndex the end (exclusive) of the subrange of characters, size of this array by default.
@throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the size of this array.
@throws IllegalArgumentException if [startIndex] is greater than [endIndex].

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun CharArray.concatToString(startIndex: Int = 0,
endIndex: Int = this.size): String {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, this.size)
    var result = ""
    for (index in startIndex until endIndex) {
        result += this[index]
    }
    return result
}
Returns a [CharArray] containing characters of this string.

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun String.toCharArray()
    CharArray {
        return CharArray(length) { get(it) }
    }
Returns a [CharArray] containing characters of this string or its substring.
@param startIndex the beginning (inclusive) of the substring, 0 by default.
@param endIndex the end (exclusive) of the substring, length of this string by default.
@throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the length of this string.
@throws IllegalArgumentException if [startIndex] is greater than [endIndex].

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.toCharArray(startIndex: Int = 0, endIndex: Int = this.length): CharArray {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, length)
    return CharArray(endIndex - startIndex) { get(startIndex + it) }
}
Decodes a string from the bytes in UTF-8 encoding in this array.
Malformed byte sequences are replaced by the replacement char '\uFFFD'.

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun ByteArray.decodeToString(): String {
    return decodeUtf8(this, 0, size, false)
}
Decodes a string from the bytes in UTF-8 encoding in this array or its subrange.
@param startIndex the beginning (inclusive) of the subrange to decode, 0 by default.
@param endIndex the end (exclusive) of the subrange to decode, size of this array by default.
@param throwOnInvalidSequence specifies whether to throw an exception on malformed byte sequence or replace it by the replacement char '\uFFFD'.
@throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the size of this array.
@throws IllegalArgumentException if [startIndex] is greater than [endIndex].
@throws CharacterCodingException if the byte array contains malformed UTF-8 byte sequence and [throwOnInvalidSequence] is true.

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun ByteArray.decodeToString(startIndex: Int = 0,
endIndex: Int = this.size,
throwOnInvalidSequence: Boolean = false): String {
    AbstractList.checkBoundsIndexes(startIndex, endIndex, this.size)
    return decodeUtf8(this, startIndex, endIndex, throwOnInvalidSequence)
}
Encodes this string to an array of bytes in UTF-8 encoding.
Any malformed char sequence is replaced by the replacement byte sequence.

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public actual fun String.encodeToByteArray(): ByteArray {
    return encodeUtf8(this, 0, length, false)
}
Encodes this string or its substring to an array of bytes in UTF-8 encoding.
@param startIndex the beginning (inclusive) of the substring to encode, 0 by default.
@param endIndex the end (exclusive) of the substring to encode, length of this string by default.
@param throwOnInvalidSequence specifies whether to throw an exception on malformed char sequence or replace.
@throws IndexOutOfBoundsException if [startIndex] is less than zero or [endIndex] is greater than the length of this string.
@throws IllegalArgumentException if [startIndex] is greater than [endIndex].
@throws CharacterCodingException if this string contains malformed char sequence and [throwOnInvalidSequence] is true.

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun String.encodeToByteArray(startIndex: Int = 0,

```

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endIndex: Int = this.length,\n  throwOnInvalidSequence: Boolean = false\n): ByteArray {\n
AbstractList.checkBoundsIndexes(startIndex, endIndex, length)\n  return encodeUtf8(this, startIndex, endIndex,
throwOnInvalidSequence)\n}\n\n**\n * Returns a copy of this string converted to upper case using the rules of the
default locale.\n *\n@Deprecated("Use uppercase() instead.\",
ReplaceWith("uppercase()"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toUpperCase(): String =
asDynamic().toUpperCase()\n\n**\n * Returns a copy of this string converted to upper case using Unicode mapping
rules of the invariant locale.\n *\n * This function supports one-to-many and many-to-one character mapping,\n *
thus the length of the returned string can be different from the length of the original string.\n *\n * @sample
samples.text.Strings.uppercase\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun String.uppercase(): String = asDynamic().toUpperCase()\n\n**\n * Returns a copy of this string
converted to lower case using the rules of the default locale.\n *\n@Deprecated("Use lowercase() instead.\",
ReplaceWith("lowercase()"))\n@DeprecatedSinceKotlin(warningSince =
"1.5")\n@kotlin.internal.InlineOnly\npublic actual inline fun String.toLowerCase(): String =
asDynamic().toLowerCase()\n\n**\n * Returns a copy of this string converted to lower case using Unicode
mapping rules of the invariant locale.\n *\n * This function supports one-to-many and many-to-one character
mapping,\n * thus the length of the returned string can be different from the length of the original string.\n *\n *
@sample samples.text.Strings.lowercase\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun String.lowercase(): String = asDynamic().toLowerCase()\n\n@kotlin.internal.InlineOnly\ninternal
actual inline fun String.nativeIndexOf(str: String, fromIndex: Int): Int = asDynamic().indexOf(str,
fromIndex)\n\n@kotlin.internal.InlineOnly\ninternal actual inline fun String.nativeLastIndexOf(str: String,
fromIndex: Int): Int = asDynamic().lastIndexOf(str, fromIndex)\n\n@kotlin.internal.InlineOnly\ninternal inline fun
String.nativeStartsWith(s: String, position: Int): Boolean = asDynamic().startsWith(s,
position)\n\n@kotlin.internal.InlineOnly\ninternal inline fun String.nativeEndsWith(s: String): Boolean =
asDynamic().endsWith(s)\n\n@kotlin.internal.InlineOnly\npublic actual inline fun String.substring(startIndex: Int):
String = asDynamic().substring(startIndex)\n\n@kotlin.internal.InlineOnly\npublic actual inline fun
String.substring(startIndex: Int, endIndex: Int): String = asDynamic().substring(startIndex,
endIndex)\n\n@Deprecated("Use String.plus() instead", ReplaceWith("this +
str"))\n@DeprecatedSinceKotlin(warningSince = "1.6")\n@kotlin.internal.InlineOnly\npublic inline fun
String.concat(str: String): String = asDynamic().concat(str)\n\n@Deprecated("Use Regex.findAll() instead or
invoke matches() on String dynamically:
this.asDynamic().match(regex)")\n@DeprecatedSinceKotlin(warningSince =
"1.6")\n@kotlin.internal.InlineOnly\npublic inline fun String.match(regex: String): Array<String>? =
asDynamic().match(regex)\n\n//native public fun String.trim(): String\n//TODO: String.replace to implement
effective trimLeading and trimTrailing\n\n@kotlin.internal.InlineOnly\ninternal inline fun
String.nativeReplace(pattern: RegExp, replacement: String): String = asDynamic().replace(pattern,
replacement)\n\n**\n * Compares two strings lexicographically, optionally ignoring case differences.\n *\n * If
[ignoreCase] is true, the result of `Char.toUpperCaseChar().toLowerCaseChar()` on each character is compared.\n
*\n@SinceKotlin("1.2")\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic
actual fun String.compareTo(other: String, ignoreCase: Boolean = false): Int {\n  if (ignoreCase) {\n    val n1 =
this.length\n    val n2 = other.length\n    val min = minOf(n1, n2)\n    if (min == 0) return n1 - n2\n    for
(index in 0 until min) {\n      var thisChar = this[index]\n      var otherChar = other[index]\n      if
(thisChar != otherChar) {\n        thisChar = thisChar.toUpperCaseChar()\n        otherChar =
otherChar.toUpperCaseChar()\n        if (thisChar != otherChar) {\n          thisChar =
thisChar.toLowerCaseChar()\n          otherChar = otherChar.toLowerCaseChar()\n          if (thisChar !=
otherChar) {\n            return thisChar.compareTo(otherChar)\n          }\n        }\n      }\n    }\n  }\n}

```



letters 'a' through 'z' and its [code] is less than `radix + 'a'.code - 10`. In this case, `this.code - 'a'.code + 10` is returned.

`Char` is one of the fullwidth Latin capital letters "\uFF21" through "\uFF3A" and its [code] is less than `radix + 0xFF21 - 10`. In this case, `this.code - 0xFF21 + 10` is returned.

`Char` is one of the fullwidth Latin small letters "\uFF41" through "\uFF5A" and its [code] is less than `radix + 0xFF41 - 10`. In this case, `this.code - 0xFF41 + 10` is returned.

```

@sample samples.text.Chars.digitToIntOrNull
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public fun
Char.digitToIntOrNull(radix: Int): Int? {
    checkRadix(radix)
    return digitOf(this, radix).takeIf { it >= 0 }
}
*/
Returns the Char that represents this decimal digit.
Throws an exception if this value is not in the range `0..9`.
If this value is in `0..9`, the decimal digit Char with code `0'.code + this` is returned.
@sample samples.text.Chars.digitToChar
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public fun Int.digitToChar(): Char {
    if (this in 0..9) {
        return '0' + this
    }
    throw IllegalArgumentException("Int $this is not a decimal digit")
}
*/
Returns the Char that represents this numeric digit value in the specified [radix].
Throws an exception if the [radix] is not in the range `2..36` or if this value is not in the range `0` until `radix`.
If this value is less than `10`, the decimal digit Char with code `0'.code + this` is returned.
Otherwise, the uppercase Latin letter with code `A'.code + this - 10` is returned.
@sample samples.text.Chars.digitToChar
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public fun Int.digitToChar(radix: Int): Char {
    if (radix !in 2..36) {
        throw IllegalArgumentException("Invalid radix: $radix. Valid radix values are in range 2..36")
    }
    if (this < 0 || this >= radix) {
        throw IllegalArgumentException("Digit $this does not represent a valid digit in radix $radix")
    }
    return if (this < 10) {
        '0' + this
    } else {
        'A' + this - 10
    }
}
*/
Converts this character to lower case using Unicode mapping rules of the invariant locale.
@Deprecated("Use lowercaseChar() instead.")
ReplaceWith("lowercaseChar()")
@DeprecatedSinceKotlin(warningSince = "1.5")
public expect fun
Char.toLowerCase(): Char
*/
Converts this character to lower case using Unicode mapping rules of the invariant locale.
This function performs one-to-one character mapping.
To support one-to-many character mapping use the [lowercase] function.
If this character has no mapping equivalent, the character itself is returned.
@sample samples.text.Chars.lowercase
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public expect fun
Char.lowercaseChar(): Char
*/
Converts this character to lower case using Unicode mapping rules of the invariant locale.
This function supports one-to-many character mapping, thus the length of the returned string can be greater than one.
For example, `"\u0130".lowercase()` returns `"\u0069\u0307"`, where `"\u0130` is the LATIN CAPITAL LETTER I WITH DOT ABOVE character (`\ufffd\u0130`).
If this character has no lower case mapping, the result of `toString()` of this char is returned.
@sample samples.text.Chars.lowercase
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public expect fun
Char.lowercase(): String
*/
Converts this character to upper case using Unicode mapping rules of the invariant locale.
@Deprecated("Use uppercaseChar() instead.")
ReplaceWith("uppercaseChar()")
@DeprecatedSinceKotlin(warningSince = "1.5")
public expect fun
Char.toUpperCase(): Char
*/
Converts this character to upper case using Unicode mapping rules of the invariant locale.
This function performs one-to-one character mapping.
To support one-to-many character mapping use the [uppercase] function.
If this character has no mapping equivalent, the character itself is returned.
@sample samples.text.Chars.uppercase
*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
public expect fun
Char.uppercaseChar(): Char
*/
Converts this character to upper case using Unicode mapping rules of the invariant locale.
This function supports one-to-many character mapping, thus the length of the returned string can be greater than one.
For example, `"\uFB00".uppercase()` returns `"\u0046\u0046"`, where `"\uFB00` is the LATIN SMALL LIGATURE FF character (`\ufffd\u0046\u0046`).
If this character has no upper case mapping, the result of `toString()` of this char is returned.
@sample samples.text.Chars.uppercase

```

```

*\/n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
Char.uppercase(): String\n\n/**\n * Converts this character to title case using Unicode mapping rules of the
invariant locale.\n * This function performs one-to-one character mapping.\n * To support one-to-many
character mapping use the [titlecase] function.\n * If this character has no mapping equivalent, the result of calling
[uppercaseChar] is returned.\n * \n * @sample samples.text.Chars.titlecase\n */\n@SinceKotlin("1.5")\npublic
expect fun Char.titlecaseChar(): Char\n\n/**\n * Converts this character to title case using Unicode mapping rules of
the invariant locale.\n * This function supports one-to-many character mapping, thus the length of the returned
string can be greater than one.\n * For example, `'\uFB00'.titlecase()` returns `'\u0046\u0066'`,\n * where
`'\uFB00` is the LATIN SMALL LIGATURE FF character (`\ufffd\uFFFD\uFFFD`).\n * If this character has no title
case mapping, the result of [uppercase] is returned instead.\n * \n * @sample samples.text.Chars.titlecase\n */\n@SinceKotlin("1.5")\npublic fun Char.titlecase(): String = titlecaseImpl()\n\n/**\n * Concatenates this Char
and a String.\n * \n * @sample samples.text.Chars.plus\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun
Char.plus(other: String): String = this.toString() + other\n\n/**\n * Returns `true` if this character is equal to the
[other] character, optionally ignoring character case.\n * \n * Two characters are considered equal ignoring case if
`Char.uppercaseChar().lowercaseChar()` on each character produces the same result.\n * \n * @param ignoreCase
`true` to ignore character case when comparing characters. By default `false`.\n * \n * @sample
samples.text.Chars.equals\n */\npublic fun Char.equals(other: Char, ignoreCase: Boolean = false): Boolean {\n    if
(this == other) return true\n    if (!ignoreCase) return false\n\n    val thisUpper = this.uppercaseChar()\n    val
otherUpper = other.uppercaseChar()\n    return thisUpper == otherUpper || thisUpper.lowercaseChar() ==
otherUpper.lowercaseChar()\n}\n\n/**\n * Returns `true` if this character is a Unicode surrogate code unit.\n */\npublic fun Char.isSurrogate(): Boolean = this in Char.MIN_SURROGATE..Char.MAX_SURROGATE\n\n/**\n * Returns the Unicode general category of this character.\n */\n@SinceKotlin("1.5")\npublic expect val
Char.category: CharCategory\n\n/**\n * Returns `true` if this character (Unicode code point) is defined in
Unicode.\n * \n * A character is considered to be defined in Unicode if its [category] is not
[CharCategory.UNASSIGNED].\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isDefined():
Boolean\n\n/**\n * Returns `true` if this character is a letter.\n * \n * A character is considered to be a letter if its
[category] is [CharCategory.UPPERCASE_LETTER],\n * [CharCategory.LOWERCASE_LETTER],
[CharCategory.TITLECASE_LETTER], [CharCategory.MODIFIER_LETTER], or
[CharCategory.OTHER_LETTER].\n * \n * @sample samples.text.Chars.isLetter\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isLetter(): Boolean\n\n/**\n * Returns `true` if this character is a
letter or digit.\n * \n * @see isLetter\n * @see isDigit\n * \n * @sample samples.text.Chars.isLetterOrDigit\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isLetterOrDigit(): Boolean\n\n/**\n * Returns `true` if this
character is a digit.\n * \n * A character is considered to be a digit if its [category] is
[CharCategory.DECIMAL_DIGIT_NUMBER].\n * \n * @sample samples.text.Chars.isDigit\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isDigit(): Boolean\n\n/**\n * Returns `true` if this character is
upper case.\n * \n * A character is considered to be an upper case character if its [category] is
[CharCategory.UPPERCASE_LETTER],\n * or it has contributory property Other_Uppercase as defined by the
Unicode Standard.\n * \n * @sample samples.text.Chars.isUpperCase\n */\n@SinceKotlin("1.5")\npublic expect
fun Char.isUpperCase(): Boolean\n\n/**\n * Returns `true` if this character is lower case.\n * \n * A character is
considered to be a lower case character if its [category] is [CharCategory.LOWERCASE_LETTER],\n * or it has
contributory property Other_Lowercase as defined by the Unicode Standard.\n * \n * @sample
samples.text.Chars.isLowerCase\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isLowerCase():
Boolean\n\n/**\n * Returns `true` if this character is a title case letter.\n * \n * A character is considered to be a title
case letter if its [category] is [CharCategory.TITLECASE_LETTER].\n * \n * @sample
samples.text.Chars.isTitleCase\n */\n@SinceKotlin("1.5")\npublic expect fun Char.isTitleCase(): Boolean\n\n/**\n * Returns `true` if this character is an ISO control character.\n * \n * A character is considered to be an ISO control
character if its [category] is [CharCategory.CONTROL],\n * meaning the Char is in the range `'\u0000'..''\u001F`
or in the range `'\u007F'..''\u009F`.\n * \n * @sample samples.text.Chars.isISOControl\n */

```

```

*\/n@SinceKotlin("1.5")\npublic expect fun Char.isISOControl(): Boolean\n\n/**\n * Determines whether a character is whitespace according to the Unicode standard.\n * Returns `true` if the character is whitespace.\n *\n * @sample samples.text.Chars.isWhitespace\n */\npublic expect fun Char.isWhitespace(): Boolean\n","/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Creates a Char with the specified [code], or throws an exception if the [code] is out of `Char.MIN_VALUE.code..Char.MAX_VALUE.code`. \n *\n * If the program that calls this function is written in a way that only valid [code] is passed as the argument,\n * using the overload that takes a [UShort] argument is preferable (`Char(intValue.toUShort())`).\n * That overload doesn't check validity of the argument, and may improve program performance when the function is called routinely inside a loop.\n *\n * @sample samples.text.Chars.charFromCode\n */\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Char(code: Int): Char {\n    if (code < Char.MIN_VALUE.code || code > Char.MAX_VALUE.code) {\n        throw IllegalArgumentException("Invalid Char code: $code")\n    }\n    return code.toChar()\n}\n\n/**\n * Creates a Char with the specified [code].\n *\n * @sample samples.text.Chars.charFromCode\n */\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("NO_ACTUAL_FOR_EXPECT")\npublic expect fun Char(code: UShort): Char\n\n/**\n * Returns the code of this Char.\n *\n * Code of a Char is the value it was constructed with, and the UTF-16 code unit corresponding to this Char.\n *\n * @sample samples.text.Chars.code\n */\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\n@Suppress("DEPRECATION")\npublic inline val Char.code: Int get() = this.toInt()\n","/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("SequencesKt")\n\npackage kotlin.sequences\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns `true` if [element] is found in the sequence.\n *\n * The operation is _terminal_.\n *\n * @public operator fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.contains(element: T): Boolean {\n    return indexOf(element) >= 0\n}\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this sequence.\n *\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.elementAt\n */\npublic fun <T> Sequence<T>.elementAt(index: Int): T {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("Sequence doesn't contain element at index $index.") }\n}\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this sequence.\n *\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.elementAtOrElse\n */\npublic fun <T> Sequence<T>.elementAtOrElse(index: Int, defaultValue: (Int) -> T): T {\n    if (index < 0)\n        return defaultValue(index)\n    val iterator = iterator()\n    var count = 0\n    while (iterator.hasNext()) {\n        val element = iterator.next()\n        if (index == count++)\n            return element\n    }\n    return defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or `null` if the [index] is out of bounds of this sequence.\n *\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.elementAtOrNull\n */\npublic fun <T> Sequence<T>.elementAtOrNull(index: Int): T? {\n    if (index < 0)\n        return null\n    val iterator = iterator()\n    var count = 0\n    while (iterator.hasNext()) {\n        val element = iterator.next()\n        if (index == count++)\n            return element\n    }\n    return null\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if no such element was found.\n *\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.find\n */\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.find(predicate: (T) -> Boolean): T? {\n    return firstOrNull(predicate)\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n *\n * The operation is

```

```

_terminal_.\n * \n * @sample samples.collections.Collections.Elements.find\n
*\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.findLast(predicate: (T) -> Boolean): T? {\n
return lastOrNull(predicate)\n}\n\n/**\n * Returns first element.\n * @throws [NoSuchElementException] if the\n
sequence is empty.\n * \n * The operation is _terminal_.\n */\npublic fun <T> Sequence<T>.first(): T {\n    val\n
iterator = iterator()\n    if (!iterator.hasNext())\n        throw NoSuchElementException("Sequence is empty.")\n
return iterator.next()\n}\n\n/**\n * Returns the first element matching the given [predicate].\n * @throws\n
[NoSuchElementException] if no such element is found.\n * \n * The operation is _terminal_.\n */\npublic inline fun\n
<T> Sequence<T>.first(predicate: (T) -> Boolean): T {\n    for (element in this) if (predicate(element)) return\n
element\n    throw NoSuchElementException("Sequence contains no element matching the predicate.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to elements of this sequence in\n
iteration order,\n * or throws [NoSuchElementException] if no non-null value was produced.\n * \n * The operation\n
is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.firstNotNullOf\n
*/\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any>\n
Sequence<T>.firstNotNullOf(transform: (T) -> R?): R {\n    return firstNotNullOfOrNull(transform) ?: throw\n
NoSuchElementException("No element of the sequence was transformed to a non-null value.")\n}\n\n/**\n * Returns the first non-null value produced by [transform] function being applied to elements of this sequence in\n
iteration order,\n * or `null` if no non-null value was produced.\n * \n * The operation is _terminal_.\n * \n *\n
@sample samples.collections.Collections.Transformations.firstNotNullOf\n
*/\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Any>\n
Sequence<T>.firstNotNullOfOrNull(transform: (T) -> R?): R? {\n    for (element in this) {\n        val result =\n
transform(element)\n        if (result != null) {\n            return result\n        }\n    }\n    return null\n}\n\n/**\n * Returns the first element, or `null` if the sequence is empty.\n * \n * The operation is _terminal_.\n */\npublic fun\n
<T> Sequence<T>.firstOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        return null\n
return iterator.next()\n}\n\n/**\n * Returns the first element matching the given [predicate], or `null` if element was\n
not found.\n * \n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.firstOrNull(predicate: (T)\n
-> Boolean): T? {\n    for (element in this) if (predicate(element)) return element\n    return null\n}\n\n/**\n * Returns first index of [element], or -1 if the sequence does not contain element.\n * \n * The operation is\n
_terminal_.\n */\npublic fun <@kotlin.internal.OnlyInputTypes T> Sequence<T>.indexOf(element: T): Int {\n    var\n
index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            return\n
index\n        index++\n    }\n    return -1\n}\n\n/**\n * Returns index of the first element matching the given\n
[predicate], or -1 if the sequence does not contain such element.\n * \n * The operation is _terminal_.\n */\npublic\n
inline fun <T> Sequence<T>.indexOfFirst(predicate: (T) -> Boolean): Int {\n    var index = 0\n    for (item in this)\n
{\n        checkIndexOverflow(index)\n        if (predicate(item))\n            return index\n        index++\n    }\n    return\n
-1\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the sequence does not\n
contain such element.\n * \n * The operation is _terminal_.\n */\npublic inline fun <T>\n
Sequence<T>.indexOfLast(predicate: (T) -> Boolean): Int {\n    var lastIndex = -1\n    var index = 0\n    for (item in\n
this) {\n        checkIndexOverflow(index)\n        if (predicate(item))\n            lastIndex = index\n            index++\n
}\n    return lastIndex\n}\n\n/**\n * Returns the last element.\n * \n * The operation is _terminal_.\n * \n * @throws\n
NoSuchElementException if the sequence is empty.\n * \n * @sample\n
samples.collections.Collections.Elements.last\n */\npublic fun <T> Sequence<T>.last(): T {\n    val iterator =\n
iterator()\n    if (!iterator.hasNext())\n        throw NoSuchElementException("Sequence is empty.")\n    var last =\n
iterator.next()\n    while (iterator.hasNext())\n        last = iterator.next()\n    return last\n}\n\n/**\n * Returns the last\n
element matching the given [predicate].\n * \n * The operation is _terminal_.\n * \n * @throws\n
NoSuchElementException if no such element is found.\n * \n * @sample\n
samples.collections.Collections.Elements.last\n */\npublic inline fun <T> Sequence<T>.last(predicate: (T) ->\n
Boolean): T {\n    var last: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element))\n
{\n            last = element\n            found = true\n        }\n    }\n    if (!found) throw\n
NoSuchElementException("Sequence contains no element matching the predicate.")\n}

```

```

@Suppress("UNCHECKED_CAST")\n    return last as T\n}\n\n/**\n * Returns last index of [element], or -1 if the
sequence does not contain element.\n *\n * The operation is _terminal_.\n */\npublic fun
<@kotlin.internal.OnlyInputTypes T> Sequence<T>.lastIndexOf(element: T): Int {\n    var lastIndex = -1\n    var
index = 0\n    for (item in this) {\n        checkIndexOverflow(index)\n        if (element == item)\n            lastIndex =
index\n            index++\n    }\n    return lastIndex\n}\n\n/**\n * Returns the last element, or `null` if the sequence is
empty.\n *\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.last\n */\npublic fun <T> Sequence<T>.lastOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        return null\n    var last = iterator.next()\n    while (iterator.hasNext())\n        last = iterator.next()\n    return
last\n}\n\n/**\n * Returns the last element matching the given [predicate], or `null` if no such element was found.\n
*\n * The operation is _terminal_.\n *\n * @sample samples.collections.Collections.Elements.last\n */\npublic
inline fun <T> Sequence<T>.lastOrNull(predicate: (T) -> Boolean): T? {\n    var last: T? = null\n    for (element in
this) {\n        if (predicate(element)) {\n            last = element\n        }\n    }\n    return last\n}\n\n/**\n * Returns the
single element, or throws an exception if the sequence is empty or has more than one element.\n *\n * The operation
is _terminal_.\n */\npublic fun <T> Sequence<T>.single(): T {\n    val iterator = iterator()\n    if
(iterator.hasNext())\n        throw NoSuchElementException("Sequence is empty.")\n    val single =
iterator.next()\n    if (iterator.hasNext())\n        throw IllegalArgumentException("Sequence has more than one
element.")\n    return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or throws
exception if there is no or more than one matching element.\n *\n * The operation is _terminal_.\n */\npublic inline
fun <T> Sequence<T>.single(predicate: (T) -> Boolean): T {\n    var single: T? = null\n    var found = false\n    for
(element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Sequence
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Sequence contains no element matching the predicate.")\n}\n\n@Suppress("UNCHECKED_CAST")\n    return single as T\n}\n\n/**\n * Returns single element, or `null` if the
sequence is empty or has more than one element.\n *\n * The operation is _terminal_.\n */\npublic fun <T>
Sequence<T>.singleOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext())\n        return null\n    val
single = iterator.next()\n    if (iterator.hasNext())\n        return null\n    return single\n}\n\n/**\n * Returns the single
element matching the given [predicate], or `null` if element was not found or more than one element was found.\n
*\n * The operation is _terminal_.\n */\npublic inline fun <T> Sequence<T>.singleOrNull(predicate: (T) ->
Boolean): T? {\n    var single: T? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element))\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return
null\n    return single\n}\n\n/**\n * Returns a sequence containing all elements except first [n] elements.\n *\n * The
operation is _intermediate_ and _stateless_.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n * @sample samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Sequence<T>.drop(n: Int):
Sequence<T> {\n    require(n >= 0) {"Requested element count $n is less than zero." }\n    return when {\n        n
== 0 -> this\n        this is DropTakeSequence -> this.drop(n)\n        else -> DropSequence(this, n)\n    }\n}\n\n/**\n * Returns a sequence containing all elements except first elements that satisfy the given [predicate].\n
*\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Transformations.drop\n */\npublic fun <T> Sequence<T>.dropWhile(predicate: (T)
-> Boolean): Sequence<T> {\n    return DropWhileSequence(this, predicate)\n}\n\n/**\n * Returns a sequence
containing only elements matching the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n
*\n * @sample samples.collections.Collections.Filtering.filter\n */\npublic fun <T> Sequence<T>.filter(predicate:
(T) -> Boolean): Sequence<T> {\n    return FilteringSequence(this, true, predicate)\n}\n\n/**\n * Returns a sequence
containing only elements matching the given [predicate].\n *\n * @param [predicate] function that takes the index of an
element and the element itself\n * and returns the result of predicate evaluation on the element.\n *\n * The
operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Filtering.filterIndexed\n */\npublic fun <T> Sequence<T>.filterIndexed(predicate:
(index: Int, T) -> Boolean): Sequence<T> {\n    // TODO: Rewrite with generalized MapFilterIndexingSequence\n
return TransformingSequence(FilteringSequence(IndexingSequence(this), true, { predicate(it.index, it.value) })), {

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it.value })\n\n/**\n * Appends all elements matching the given [predicate] to the given [destination].\n * @param
 [predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n *\npublic inline fun <T, C : MutableCollection<in T>>
Sequence<T>.filterIndexedTo(destination: C, predicate: (index: Int, T) -> Boolean): C {\n  forEachIndexed {
index, element ->\n    if (predicate(index, element)) destination.add(element)\n  }\n  return
destination\n}\n\n/**\n * Returns a sequence containing all elements that are instances of specified type parameter
R.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Filtering.filterIsInstance\n *\npublic inline fun <reified R>
Sequence<*>.filterIsInstance(): Sequence<@kotlin.internal.NoInfer R> {\n
@Suppress("UNCHECKED_CAST")\n  return filter { it is R } as Sequence<R>\n}\n\n/**\n * Appends all
elements that are instances of specified type parameter R to the given [destination].\n *\n * The operation is
_intermediate_.\n *\n * @sample samples.collections.Collections.Filtering.filterIsInstanceTo\n *\npublic inline fun
<reified R, C : MutableCollection<in R>> Sequence<*>.filterIsInstanceTo(destination: C): C {\n  for (element in
this) if (element is R) destination.add(element)\n  return destination\n}\n\n/**\n * Returns a sequence containing
all elements not matching the given [predicate].\n *\n * The operation is _intermediate_ and _stateless_.\n *\n *
@sample samples.collections.Collections.Filtering.filter\n *\npublic fun <T> Sequence<T>.filterNot(predicate: (T)
-> Boolean): Sequence<T> {\n  return FilteringSequence(this, false, predicate)\n}\n\n/**\n * Returns a sequence
containing all elements that are not `null`.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Filtering.filterNotNull\n *\npublic fun <T : Any> Sequence<T?>.filterNotNull():
Sequence<T> {\n  @Suppress("UNCHECKED_CAST")\n  return filterNot { it == null } as
Sequence<T>\n}\n\n/**\n * Appends all elements that are not `null` to the given [destination].\n *\n * The operation
is _terminal_.\n *\n * @sample samples.collections.Collections.Filtering.filterNotNullTo\n *\npublic fun <C :
MutableCollection<in T>, T : Any> Sequence<T?>.filterNotNullTo(destination: C): C {\n  for (element in this) if
(element != null) destination.add(element)\n  return destination\n}\n\n/**\n * Appends all elements not matching
the given [predicate] to the given [destination].\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <T, C : MutableCollection<in T>>
Sequence<T>.filterNotTo(destination: C, predicate: (T) -> Boolean): C {\n  for (element in this) if
(!predicate(element)) destination.add(element)\n  return destination\n}\n\n/**\n * Appends all elements matching
the given [predicate] to the given [destination].\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Filtering.filterTo\n *\npublic inline fun <T, C : MutableCollection<in T>>
Sequence<T>.filterTo(destination: C, predicate: (T) -> Boolean): C {\n  for (element in this) if (predicate(element))
destination.add(element)\n  return destination\n}\n\n/**\n * Returns a sequence containing first [n] elements.\n *\n *
The operation is _intermediate_ and _stateless_.\n *\n * @throws IllegalArgumentException if [n] is negative.\n *\n *
@sample samples.collections.Collections.Transformations.take\n *\npublic fun <T> Sequence<T>.take(n: Int):
Sequence<T> {\n  require(n >= 0) { "Requested element count $n is less than zero." }\n  return when {\n    n
== 0 -> emptySequence()\n    this is DropTakeSequence -> this.take(n)\n    else -> TakeSequence(this, n)\n  }\n}\n\n/**\n * Returns a sequence containing first elements satisfying the given [predicate].\n *\n * The operation
is _intermediate_ and _stateless_.\n *\n * @sample samples.collections.Collections.Transformations.take\n *\npublic fun <T> Sequence<T>.takeWhile(predicate: (T) -> Boolean): Sequence<T> {\n  return
TakeWhileSequence(this, predicate)\n}\n\n/**\n * Returns a sequence that yields elements of this sequence sorted
according to their natural sort order.\n *\n * The sort is _stable_. It means that equal elements preserve their order
relative to each other after sorting.\n *\n * The operation is _intermediate_ and _stateful_.\n *\npublic fun <T :
Comparable<T>> Sequence<T>.sorted(): Sequence<T> {\n  return object : Sequence<T> {\n    override fun
iterator(): Iterator<T> {\n      val sortedList = this@sorted.toMutableList()\n      sortedList.sort()\n      return sortedList.iterator()\n    }\n  }\n}\n\n/**\n * Returns a sequence that yields elements of this sequence
sorted according to natural sort order of the value returned by specified [selector] function.\n *\n * The sort is
_stable_. It means that equal elements preserve their order relative to each other after sorting.\n *\n * The operation

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valueTransform(element))\n } return destination\n\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs\n * provided by [transform] function applied to each element of the given sequence.\n *
* If any of two pairs would have the same key the last one gets added to the map.\n *\n * The operation is
_terminal_.\n * \n * @sample samples.collections.Collections.Transformations.associateTo\n */\npublic inline fun
<T, K, V, M : MutableMap<in K, in V>> Sequence<T>.associateTo(destination: M, transform: (T) -> Pair<K, V>):
M {\n for (element in this) {\n destination += transform(element)\n }\n return destination\n}\n\n\n/**\n *
Returns a [Map] where keys are elements from the given sequence and values are\n * produced by the
[valueSelector] function applied to each element.\n *\n * If any two elements are equal, the last one gets added to
the map.\n *\n * The returned map preserves the entry iteration order of the original sequence.\n *\n * The
operation is _terminal_.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n
*/\n@SinceKotlin("1.3")\npublic inline fun <K, V> Sequence<K>.associateWith(valueSelector: (K) -> V):
Map<K, V> {\n val result = LinkedHashMap<K, V>()\n return associateWithTo(result,
valueSelector)\n}\n\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each
element of the given sequence,\n * where key is the element itself and value is provided by the [valueSelector]
function applied to that key.\n *\n * If any two elements are equal, the last one overwrites the former value in the
map.\n *\n * The operation is _terminal_.\n * \n * @sample
samples.collections.Collections.Transformations.associateWithTo\n */\n@SinceKotlin("1.3")\npublic inline fun
<K, V, M : MutableMap<in K, in V>> Sequence<K>.associateWithTo(destination: M, valueSelector: (K) -> V): M
{\n for (element in this) {\n destination.put(element, valueSelector(element))\n }\n return
destination\n}\n\n\n/**\n * Appends all elements to the given [destination] collection.\n *\n * The operation is
_terminal_.\n * \n * @public fun <T, C : MutableCollection<in T>> Sequence<T>.toCollection(destination: C): C {\n
for (item in this) {\n destination.add(item)\n }\n return destination\n}\n\n\n/**\n * Returns a new [HashSet] of
all elements.\n *\n * The operation is _terminal_.\n * \n * @public fun <T> Sequence<T>.toHashSet(): HashSet<T> {\n
return toCollection(HashSet<T>())\n}\n\n\n/**\n * Returns a [List] containing all elements.\n *\n * The operation is
_terminal_.\n * \n * @public fun <T> Sequence<T>.toList(): List<T> {\n return
this.toMutableList().optimizeReadOnlyList()\n}\n\n\n/**\n * Returns a new [MutableList] filled with all elements of
this sequence.\n *\n * The operation is _terminal_.\n * \n * @public fun <T> Sequence<T>.toMutableList():
MutableList<T> {\n return toCollection(ArrayList<T>())\n}\n\n\n/**\n * Returns a [Set] of all elements.\n *\n *
The returned set preserves the element iteration order of the original sequence.\n *\n * The operation is
_terminal_.\n * \n * @public fun <T> Sequence<T>.toSet(): Set<T> {\n return
toCollection(LinkedHashSet<T>()).optimizeReadOnlySet()\n}\n\n\n/**\n * Returns a single sequence of all elements
from results of [transform] function being invoked on each element of original sequence.\n *\n * The operation is
_intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIterable")\npublic fun <T, R>
Sequence<T>.flatMap(transform: (T) -> Iterable<R>): Sequence<R> {\n return FlatteningSequence(this,
transform, Iterable<R>::iterator)\n}\n\n\n/**\n * Returns a single sequence of all elements from results of [transform]
function being invoked on each element of original sequence.\n *\n * The operation is _intermediate_ and
_stateless_.\n * \n * @sample samples.collections.Collections.Transformations.flatMap\n */\n@public fun <T, R>
Sequence<T>.flatMap(transform: (T) -> Sequence<R>): Sequence<R> {\n return FlatteningSequence(this,
transform, Sequence<R>::iterator)\n}\n\n\n/**\n * Returns a single sequence of all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original sequence.\n *\n * The operation
is _intermediate_ and _stateless_.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*/\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.jvm.JvmName("flatMapIndexedIterable")\npublic fun <T, R>
Sequence<T>.flatMapIndexed(transform: (index: Int, T) -> Iterable<R>): Sequence<R> {\n return
flatMapIndexed(this, transform, Iterable<R>::iterator)\n}\n\n\n/**\n * Returns a single sequence of all elements

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yielded from results of [transform] function being invoked on each element\n \* and its index in the original sequence.\n \*\n \* The operation is \_intermediate\_ and \_stateless\_.\n \*\n \* @sample samples.collections.Collections.Transformations.flatMapIndexed\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIndexedSequence")\n public fun <T, R> Sequence<T>.flatMapIndexed(transform: (index: Int, T) -> Sequence<R>): Sequence<R> {\n return flatMapIndexed(this, transform, Sequence<R>::iterator)\n }\n\n /\*\*\n \* Appends all elements yielded from results of [transform] function being invoked on each element\n \* and its index in the original sequence, to the given [destination].\n \*\n \* The operation is \_terminal\_.\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n @kotlin.internal.InlineOnly\n public inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapIndexedTo(destination: C, transform: (index: Int, T) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(checkIndexOverflow(index++), element)\n destination.addAll(list)\n }\n return destination\n }\n\n /\*\*\n \* Appends all elements yielded from results of [transform] function being invoked on each element\n \* and its index in the original sequence, to the given [destination].\n \*\n \* The operation is \_terminal\_.\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIndexedSequenceTo")\n @kotlin.internal.InlineOnly\n public inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapIndexedTo(destination: C, transform: (index: Int, T) -> Sequence<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(checkIndexOverflow(index++), element)\n destination.addAll(list)\n }\n return destination\n }\n\n /\*\*\n \* Appends all elements yielded from results of [transform] function being invoked on each element of original sequence, to the given [destination].\n \*\n \* The operation is \_terminal\_.\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIterableTo")\n public inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapTo(destination: C, transform: (T) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n }\n\n /\*\*\n \* Appends all elements yielded from results of [transform] function being invoked on each element of original sequence, to the given [destination].\n \*\n \* The operation is \_terminal\_.\n \*\n public inline fun <T, R, C : MutableCollection<in R>> Sequence<T>.flatMapTo(destination: C, transform: (T) -> Sequence<R>): C {\n for (element in this) {\n val list = transform(element)\n destination.addAll(list)\n }\n return destination\n }\n\n /\*\*\n \* Groups elements of the original sequence by the key returned by the given [keySelector] function\n \* applied to each element and returns a map where each group key is associated with a list of corresponding elements.\n \*\n \* The returned map preserves the entry iteration order of the keys produced from the original sequence.\n \*\n \* The operation is \_terminal\_.\n \*\n \* @sample samples.collections.Collections.Transformations.groupBy\n \*\n public inline fun <T, K> Sequence<T>.groupBy(keySelector: (T) -> K): Map<K, List<T>> {\n return groupByTo(LinkedHashMap<K, MutableList<T>>(), keySelector)\n }\n\n /\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original sequence\n \* by the key returned by the given [keySelector] function applied to the element\n \* and returns a map where each group key is associated with a list of corresponding values.\n \*\n \* The returned map preserves the entry iteration order of the keys produced from the original sequence.\n \*\n \* The operation is \_terminal\_.\n \*\n \* @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n \*\n public inline fun <T, K, V> Sequence<T>.groupBy(keySelector: (T) -> K, valueTransform: (T) -> V): Map<K, List<V>> {\n return groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n }\n\n /\*\*\n \* Groups elements of the original sequence by the key returned by the given [keySelector] function\n \* applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.\n \*\n \* @return The [destination] map.\n \*\n \* The operation is \_terminal\_.\n \*\n \* @sample

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samples.collections.Collections.Transformations.groupBy\n *\npublic inline fun <T, K, M : MutableMap<in K,
MutableList<T>>> Sequence<T>.groupByTo(destination: M, keySelector: (T) -> K): M {\n  for (element in this)
{\n    val key = keySelector(element)\n    val list = destination.getOrPut(key) { ArrayList<T>() }\n
list.add(element)\n  }\n  return destination\n}\n\n/**\n * Groups values returned by the [valueTransform] function
applied to each element of the original sequence\n * by the key returned by the given [keySelector] function applied
to the element\n * and puts to the [destination] map each group key associated with a list of corresponding values.\n
*\n * @return The [destination] map.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n *\npublic inline fun <T, K, V, M :
MutableMap<in K, MutableList<V>>> Sequence<T>.groupByTo(destination: M, keySelector: (T) -> K,
valueTransform: (T) -> V): M {\n  for (element in this) {\n    val key = keySelector(element)\n    val list =
destination.getOrPut(key) { ArrayList<V>() }\n    list.add(valueTransform(element))\n  }\n  return
destination\n}\n\n/**\n * Creates a [Grouping] source from a sequence to be used later with one of group-and-fold
operations\n * using the specified [keySelector] function to extract a key from each element.\n *\n * The operation is
_intermediate_ and _stateless_.\n *\n * @sample samples.collections.Grouping.groupingByEachCount\n
*\n@SinceKotlin("1.1")\npublic inline fun <T, K> Sequence<T>.groupingBy(crossinline keySelector: (T) -> K):
Grouping<T, K> {\n  return object : Grouping<T, K> {\n    override fun sourceIterator(): Iterator<T> =
this@groupingBy.iterator()\n    override fun keyOf(element: T): K = keySelector(element)\n  }\n}\n\n/**\n *
Returns a sequence containing the results of applying the given [transform] function\n * to each element in the
original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Transformations.map\n *\npublic fun <T, R> Sequence<T>.map(transform: (T) ->
R): Sequence<R> {\n  return TransformingSequence(this, transform)\n}\n\n/**\n * Returns a sequence containing
the results of applying the given [transform] function\n * to each element and its index in the original sequence.\n
*\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of
the transform applied to the element.\n *\n * The operation is _intermediate_ and _stateless_.\n *\npublic fun <T,
R> Sequence<T>.mapIndexed(transform: (index: Int, T) -> R): Sequence<R> {\n  return
TransformingIndexedSequence(this, transform)\n}\n\n/**\n * Returns a sequence containing only the non-null
results of applying the given [transform] function\n * to each element and its index in the original sequence.\n
*\n * @param [transform] function that takes the index of an element and the element itself\n * and returns the result of
the transform applied to the element.\n *\n * The operation is _intermediate_ and _stateless_.\n *\npublic fun <T, R
: Any> Sequence<T>.mapIndexedNotNull(transform: (index: Int, T) -> R?): Sequence<R> {\n  return
TransformingIndexedSequence(this, transform).filterNotNull()\n}\n\n/**\n * Applies the given [transform] function
to each element and its index in the original sequence\n * and appends only the non-null results to the given
[destination].\n *\n * @param [transform] function that takes the index of an element and the element itself\n * and
returns the result of the transform applied to the element.\n *\n * The operation is _terminal_.\n *\npublic inline fun
<T, R : Any, C : MutableCollection<in R>> Sequence<T>.mapIndexedNotNullTo(destination: C, transform: (index:
Int, T) -> R?): C {\n  for (item in this)\n    destination.add(transform(checkIndexOverflow(index++), item))\n  return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original
sequence\n * and appends the results to the given [destination].\n *\n * @param [transform] function that takes the
index of an element and the element itself\n * and returns the result of the transform applied to the element.\n *\n *
The operation is _terminal_.\n *\npublic inline fun <T, R, C : MutableCollection<in R>>
Sequence<T>.mapIndexedTo(destination: C, transform: (index: Int, T) -> R): C {\n  var index = 0\n  for (item in
this)\n    destination.add(transform(checkIndexOverflow(index++), item))\n  return destination\n}\n\n/**\n * Returns a sequence containing only the non-null results of applying the given [transform] function\n * to each
element in the original sequence.\n *\n * The operation is _intermediate_ and _stateless_.\n *\n * @sample
samples.collections.Collections.Transformations.mapNotNull\n *\npublic fun <T, R : Any>
Sequence<T>.mapNotNull(transform: (T) -> R?): Sequence<R> {\n  return TransformingSequence(this,
transform).filterNotNull()\n}\n\n/**\n * Applies the given [transform] function to each element in the original
sequence\n * and appends only the non-null results to the given [destination].\n *\n * The operation is _terminal_.\n

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accumulator = initial\n  for (element in this) accumulator = operation(checkIndexOverflow(index++), accumulator,
element)\n  return accumulator\n}\n\n/**\n * Performs the given [action] on each element.\n *\n * The operation is
_terminal_.\n *\n */\npublic inline fun <T> Sequence<T>.forEach(action: (T) -> Unit): Unit {\n  for (element in this)
action(element)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the
element.\n *\n * @param [action] function that takes the index of an element and the element itself\n *\n * and performs the
action on the element.\n *\n * The operation is _terminal_.\n *\n */\npublic inline fun <T>
Sequence<T>.forEachIndexed(action: (index: Int, T) -> Unit): Unit {\n  var index = 0\n  for (item in this)
action(checkIndexOverflow(index++), item)\n}\n\n@Deprecated("Use maxOrNull instead.")
ReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Sequence<Double>.max(): Double? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.")
ReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Sequence<Float>.max(): Float? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.")
ReplaceWith("this.maxOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun <T : Comparable<T>> Sequence<T>.max(): T? {\n  return
maxOrNull()\n}\n\n@Deprecated("Use maxByOrNull instead.")
ReplaceWith("this.maxByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince = "1.6")\npublic inline fun <T, R : Comparable<R>> Sequence<T>.maxBy(selector: (T) ->
R): T? {\n  return maxByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the largest value of the
given function or `null` if there are no elements.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Aggregates.maxByOrNull\n *\n */\n@SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Sequence<T>.maxByOrNull(selector: (T) -> R): T? {\n  val iterator = iterator()\n  if
(!iterator.hasNext()) return null\n  var maxElem = iterator.next()\n  if (!iterator.hasNext()) return maxElem\n  var
maxValue = selector(maxElem)\n  do {\n    val e = iterator.next()\n    val v = selector(e)\n    if (maxValue <
v) {\n      maxElem = e\n      maxValue = v\n    }\n  } while (iterator.hasNext())\n  return
maxElem\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n *\n * applied to
each element in the sequence.\n *\n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n *\n * @throws NoSuchElementException if the sequence is empty.\n *\n * The operation is
_terminal_.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.maxOf(selector: (T) ->
Double): Double {\n  val iterator = iterator()\n  if (!iterator.hasNext()) throw NoSuchElementException()\n  var
maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n
maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all
values produced by [selector] function\n *\n * applied to each element in the sequence.\n *\n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n *\n * @throws NoSuchElementException
if the sequence is empty.\n *\n * The operation is _terminal_.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.maxOf(selector: (T) ->
Float): Float {\n  val iterator = iterator()\n  if (!iterator.hasNext()) throw NoSuchElementException()\n  var
maxValue = selector(iterator.next())\n  while (iterator.hasNext()) {\n    val v = selector(iterator.next())\n
maxValue = maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all
values produced by [selector] function\n *\n * applied to each element in the sequence.\n *\n * @throws
NoSuchElementException if the sequence is empty.\n *\n * The operation is _terminal_.\n *\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>
Sequence<T>.maxOf(selector: (T) -> R): R {\n  val iterator = iterator()\n  if (!iterator.hasNext()) throw

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NoSuchElementException()\n    var maxValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of values produced by [selector]\n * function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T> Sequence<T>.maxOrNull(selector:\n * (T) -> Double): Double? {\n *     val iterator = iterator()\n *     if (!iterator.hasNext()) return null\n *     var maxValue =\n *     selector(iterator.next())\n *     while (iterator.hasNext()) {\n *         val v = selector(iterator.next())\n *         maxValue =\n *         maxOf(maxValue, v)\n *     }\n *     return maxValue\n * }\n\n/**\n * Returns the largest value among all values produced\n * by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of\n * values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T> Sequence<T>.maxOrNull(selector:\n * (T) -> Float): Float? {\n *     val iterator = iterator()\n *     if (!iterator.hasNext()) return null\n *     var maxValue =\n *     selector(iterator.next())\n *     while (iterator.hasNext()) {\n *         val v = selector(iterator.next())\n *         maxValue =\n *         maxOf(maxValue, v)\n *     }\n *     return maxValue\n * }\n\n/**\n * Returns the largest value among all values produced\n * by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * The\n * operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T, R : Comparable<R>>\n * Sequence<T>.maxOrNull(selector: (T) -> R): R? {\n *     val iterator = iterator()\n *     if (!iterator.hasNext()) return\n *     null\n *     var maxValue = selector(iterator.next())\n *     while (iterator.hasNext()) {\n *         val v =\n *         selector(iterator.next())\n *         if (maxValue < v) {\n *             maxValue = v\n *         }\n *     }\n *     return\n *     maxValue\n * }\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values\n * produced by [selector] function applied to each element in the sequence.\n * \n * @throws\n * NoSuchElementException if the sequence is empty.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T, R>\n * Sequence<T>.maxOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n *     val iterator = iterator()\n *     if\n *     (!iterator.hasNext()) throw NoSuchElementException()\n *     var maxValue = selector(iterator.next())\n *     while\n *     (iterator.hasNext()) {\n *         val v = selector(iterator.next())\n *         if (comparator.compare(maxValue, v) < 0) {\n *             maxValue = v\n *         }\n *     }\n *     return maxValue\n * }\n\n/**\n * Returns the largest value according to the provided\n * [comparator]\n * among all values produced by [selector] function applied to each element in the sequence or `null`\n * if there are no elements.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n * @OverloadResolution\n * ByLambdaReturnType\n * @kotlin.internal.InlineOnly\n * public inline fun <T, R>\n * Sequence<T>.maxOfOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n *     val iterator =\n *     iterator()\n *     if (!iterator.hasNext()) return null\n *     var maxValue = selector(iterator.next())\n *     while\n *     (iterator.hasNext()) {\n *         val v = selector(iterator.next())\n *         if (comparator.compare(maxValue, v) < 0) {\n *             maxValue = v\n *         }\n *     }\n *     return maxValue\n * }\n\n/**\n * Returns the largest element or `null` if there are no\n * elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * public fun Sequence<Double>.maxOrNull(): Double? {\n *     val iterator = iterator()\n *     if (!iterator.hasNext()) return null\n *     var max = iterator.next()\n *     while (iterator.hasNext()) {\n *         val e =\n *         iterator.next()\n *         max = maxOf(max, e)\n *     }\n *     return max\n * }\n\n/**\n * Returns the largest element or `null` if\n * there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * The operation is _terminal_.\n *\n * @SinceKotlin("1.4")\n * public fun Sequence<Float>.maxOrNull(): Float? {\n *     val iterator = iterator()\n *     if\n *     (!iterator.hasNext()) return null\n *     var max = iterator.next()\n *     while (iterator.hasNext()) {\n *         val e =

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iterator.next()\n    max = maxOf(max, e)\n    }\n    return max\n}\n\n/**\n * Returns the largest element or `null` if
there are no elements.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\npublic fun <T :
Comparable<T>> Sequence<T>.maxOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return
null\n    var max = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (max < e) max
= e\n    }\n    return max\n}\n\n@Deprecated("Use maxWithOrNull instead."),
ReplaceWith("this.maxWithOrNull(comparator)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun <T> Sequence<T>.maxWith(comparator: Comparator<in T>): T? {\n
return maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the largest value according to the
provided [comparator] or `null` if there are no elements.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\npublic fun <T> Sequence<T>.maxWithOrNull(comparator: Comparator<in T>): T? {\n
val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var max = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        if (comparator.compare(max, e) < 0) max = e\n    }\n    return max\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Sequence<Double>.min(): Double? {\n    return
minOrNull()\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.1")\npublic fun Sequence<Float>.min(): Float? {\n    return
minOrNull()\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun <T : Comparable<T>> Sequence<T>.min(): T? {\n    return
minOrNull()\n}\n\n@Deprecated("Use minByOrNull instead."),
ReplaceWith("this.minByOrNull(selector)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince = "1.6")\npublic inline fun <T, R : Comparable<R>> Sequence<T>.minBy(selector: (T) ->
R): T? {\n    return minByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the smallest value of the
given function or `null` if there are no elements.\n *\n * The operation is _terminal_.\n *\n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <T, R :
Comparable<R>> Sequence<T>.minByOrNull(selector: (T) -> R): T? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var minElem = iterator.next()\n    if (!iterator.hasNext()) return minElem\n    var
minValue = selector(minElem)\n    do {\n        val e = iterator.next()\n        val v = selector(e)\n        if (minValue >
v) {\n            minElem = e\n            minValue = v\n        }\n    } while (iterator.hasNext())\n    return
minElem\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each element in the sequence.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result
is `NaN`.\n * \n * @throws NoSuchElementException if the sequence is empty.\n *\n * The operation is
_terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minOf(selector: (T) ->
Double): Double {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all
values produced by [selector] function\n * applied to each element in the sequence.\n * \n * If any of values
produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException
if the sequence is empty.\n *\n * The operation is _terminal_.\n */\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minOf(selector: (T) ->
Float): Float {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw NoSuchElementException()\n    var
minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n
minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all

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values produced by [selector] function\n \* applied to each element in the sequence.\n \* \n \* @throws NoSuchElementException if the sequence is empty.\n \* \n \* The operation is \_terminal\_.\n

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nSequence<T>.minOf(selector: (T) -> R): R {\n    val iterator = iterator()\n    if (!iterator.hasNext()) throw\n    NoSuchElementException()\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v\n        = selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of values produced by [selector]\n * function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minOrNull(selector:\n(T) -> Double): Double? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =\n        minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * If any of\n * values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * The operation is _terminal_.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T> Sequence<T>.minOrNull(selector:\n(T) -> Float): Float? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var minValue =\n    selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        minValue =\n        minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced\n * by [selector] function\n * applied to each element in the sequence or `null` if there are no elements.\n * \n * The\n * operation is _terminal_.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R : Comparable<R>>\nSequence<T>.minOrNull(selector: (T) -> R): R? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return\n    null\n    var minValue = selector(iterator.next())\n    while (iterator.hasNext()) {\n        val v =\n        selector(iterator.next())\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values\n * produced by [selector] function applied to each element in the sequence.\n * \n * @throws\n * NoSuchElementException if the sequence is empty.\n * \n * The operation is _terminal_.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\nSequence<T>.minOfWith(comparator: Comparator<in R>, selector: (T) -> R): R {\n    val iterator = iterator()\n    if\n    (!iterator.hasNext()) throw NoSuchElementException()\n    var minValue = selector(iterator.next())\n    while\n    (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(minValue, v) > 0) {\n           \n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the\n * provided [comparator]\n * among all values produced by [selector] function applied to each element in the sequence\n * or `null` if there are no elements.\n * \n * The operation is _terminal_.\n
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```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <T, R>\nSequence<T>.minOfWithOrNull(comparator: Comparator<in R>, selector: (T) -> R): R? {\n    val iterator =\n    iterator()\n    if (!iterator.hasNext()) return null\n    var minValue = selector(iterator.next())\n    while\n    (iterator.hasNext()) {\n        val v = selector(iterator.next())\n        if (comparator.compare(minValue, v) > 0) {\n           \n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest element or `null` if there are\n * no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * The operation is _terminal_.\n
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*\n@SinceKotlin("1.4")\npublic fun Sequence<Double>.minOrNull(): Double? {\n    val iterator = iterator()\n    if
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(!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if
there are no elements.\n * \n * If any of elements is `NaN` returns `NaN`.\n * \n * The operation is _terminal_.\n * \n *\n * @SinceKotlin("1.4")\npublic fun Sequence<Float>.minOrNull(): Float? {\n    val iterator = iterator()\n    if
(!iterator.hasNext()) return null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e =
iterator.next()\n        min = minOf(min, e)\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if
there are no elements.\n * \n * The operation is _terminal_.\n * \n *\n * @SinceKotlin("1.4")\npublic fun <T> :
Comparable<T>> Sequence<T>.minOrNull(): T? {\n    val iterator = iterator()\n    if (!iterator.hasNext()) return
null\n    var min = iterator.next()\n    while (iterator.hasNext()) {\n        val e = iterator.next()\n        if (min > e) min
= e\n    }\n    return min\n}\n\n@Deprecated("Use minWithOrNull instead.")\nReplaceWith("this.minWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\npublic fun <T> Sequence<T>.minWith(comparator: Comparator<in T>): T? {\n
return minWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the smallest value according to
the provided [comparator] or `null` if there are no elements.\n * \n * The operation is _terminal_.\n * \n *\n * @SinceKotlin("1.4")\npublic fun <T> Sequence<T>.minWithOrNull(comparator: Comparator<in T>): T? {\n
val iterator = iterator()\n    if (!iterator.hasNext()) return null\n    var min = iterator.next()\n    while
(iterator.hasNext()) {\n        val e = iterator.next()\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return
min\n}\n\n/**\n * Returns `true` if the sequence has no elements.\n * \n * The operation is _terminal_.\n * \n *\n * @sample samples.collections.Collections.Aggregates.none\n * \n *\npublic fun <T> Sequence<T>.none(): Boolean {\n
return !iterator().hasNext()\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * The
operation is _terminal_.\n * \n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n * \n *\npublic inline fun <T> Sequence<T>.none(predicate: (T) -> Boolean): Boolean {\n    for (element in this) if
(predicate(element)) return false\n    return true\n}\n\n/**\n * Returns a sequence which performs the given [action]
on each element of the original sequence as they pass through it.\n * \n * The operation is _intermediate_ and
_stateless_.\n * \n *\n * @SinceKotlin("1.1")\npublic fun <T> Sequence<T>.onEach(action: (T) -> Unit): Sequence<T>
{\n    return map {\n        action(it)\n        it\n    }\n}\n\n/**\n * Returns a sequence which performs the given
[action] on each element of the original sequence as they pass through it.\n * \n * @param [action] function that takes
the index of an element and the element itself\n * and performs the action on the element.\n * \n * The operation is
_intermediate_ and _stateless_.\n * \n *\n * @SinceKotlin("1.4")\npublic fun <T> Sequence<T>.onEachIndexed(action:
(index: Int, T) -> Unit): Sequence<T> {\n    return mapIndexed { index, element ->\n        action(index, element)\n
element\n    }\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element.\n * \n * Throws an exception if this sequence is empty. If
the sequence can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its
receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and
calculates the next accumulator value.\n * \n * The operation is _terminal_.\n * \n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n * \n *\npublic inline fun <S, T : S>
Sequence<T>.reduce(operation: (acc: S, T) -> S): S {\n    val iterator = this.iterator()\n    if (!iterator.hasNext())
throw UnsupportedOperationException("Empty sequence can't be reduced.")\n    var accumulator: S =
iterator.next()\n    while (iterator.hasNext()) {\n        accumulator = operation(accumulator, iterator.next())\n    }\n
return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from
left to right\n * to current accumulator value and each element with its index in the original sequence.\n * \n *
Throws an exception if this sequence is empty. If the sequence can be empty in an expected way,\n * please use
[reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function
that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next
accumulator value.\n * \n * The operation is _terminal_.\n * \n * \n * @sample
samples.collections.Collections.Aggregates.reduce\n * \n *\npublic inline fun <S, T : S>
Sequence<T>.reduceIndexed(operation: (index: Int, acc: S, T) -> S): S {\n    val iterator = this.iterator()\n    if
(!iterator.hasNext()) throw UnsupportedOperationException("Empty sequence can't be reduced.")\n    var index =

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1\n var accumulator: S = iterator.next()\n while (iterator.hasNext()) {\n     accumulator =
operation(checkIndexOverflow(index++), accumulator, iterator.next())\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element with its index in the original sequence.\n * \n * Returns `null` if the sequence is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n@SinceKotlin("1.4")\npublic inline fun <S, T : S> Sequence<T>.reduceIndexedOrNull(operation: (index: Int, acc: S, T) -> S): S? {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) return null\n    var index = 1\n    var accumulator: S = iterator.next()\n    while (iterator.hasNext()) {\n        accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current accumulator value and each element.\n * \n * Returns `null` if the sequence is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * The operation is _terminal_.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun <S, T : S> Sequence<T>.reduceOrNull(operation: (acc: S, T) -> S): S? {\n    val iterator = this.iterator()\n    if (!iterator.hasNext()) return null\n    var accumulator: S = iterator.next()\n    while (iterator.hasNext()) {\n        accumulator = operation(accumulator, iterator.next())\n    }\n    return accumulator\n}\n\n/**\n * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * \n * The [initial] value should also be immutable (or should not be mutated)\n * as it may be passed to [operation] function later because of sequence's lazy nature.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n */\n@SinceKotlin("1.4")\npublic fun <T, R> Sequence<T>.runningFold(initial: R, operation: (acc: R, T) -> R): Sequence<R> {\n    return sequence {\n        yield(initial)\n        var accumulator = initial\n        for (element in this@runningFold) {\n            accumulator = operation(accumulator, element)\n            yield(accumulator)\n        }\n    }\n}\n\n/**\n * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original sequence and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * \n * The [initial] value should also be immutable (or should not be mutated)\n * as it may be passed to [operation] function later because of sequence's lazy nature.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Aggregates.runningFold\n */\n@SinceKotlin("1.4")\npublic fun <T, R> Sequence<T>.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): Sequence<R> {\n    return sequence {\n        yield(initial)\n        var index = 0\n        var accumulator = initial\n        for (element in this@runningFoldIndexed) {\n            accumulator = operation(checkIndexOverflow(index++), accumulator, element)\n            yield(accumulator)\n        }\n    }\n}\n\n/**\n * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this sequence.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting sequence.\n * \n * @param [operation] function that takes current accumulator value and the element, and calculates the next accumulator value.\n * \n * The operation is _intermediate_ and _stateless_.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun <S, T : S>

```

```

Sequence<T>.runningReduce(operation: (acc: S, T) -> S): Sequence<S> {
    return sequence {
        val iterator = iterator()
        if (iterator.hasNext()) {
            var accumulator: S = iterator.next()
            yield(accumulator)
            while (iterator.hasNext()) {
                accumulator = operation(accumulator, iterator.next())
            }
        }
    }
}

/**
 * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original sequence and current accumulator value that starts with the first element of this sequence.
 * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting sequence.
 * @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 * The operation is _intermediate_ and _stateless_.
 * @sample samples.collections.Collections.Aggregates.runningReduce
 */
@SinceKotlin("1.4")
public fun <S, T : S> Sequence<T>.runningReduceIndexed(operation: (index: Int, acc: S, T) -> S): Sequence<S> {
    return sequence {
        val iterator = iterator()
        if (iterator.hasNext()) {
            var accumulator: S = iterator.next()
            yield(accumulator)
            var index = 1
            while (iterator.hasNext()) {
                accumulator = operation(checkIndexOverflow(index++), accumulator, iterator.next())
            }
        }
    }
}

/**
 * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right to each element and current accumulator value that starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting sequence.
 * The [initial] value should also be immutable (or should not be mutated) as it may be passed to [operation] function later because of sequence's lazy nature.
 * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.
 * The operation is _intermediate_ and _stateless_.
 * @sample samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T, R> Sequence<T>.scan(initial: R, operation: (acc: R, T) -> R): Sequence<R> {
    return runningFold(initial, operation)
}

/**
 * Returns a sequence containing successive accumulation values generated by applying [operation] from left to right to each element, its index in the original sequence and current accumulator value that starts with [initial] value.
 * Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting sequence.
 * The [initial] value should also be immutable (or should not be mutated) as it may be passed to [operation] function later because of sequence's lazy nature.
 * @param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.
 * The operation is _intermediate_ and _stateless_.
 * @sample samples.collections.Collections.Aggregates.scan
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T, R> Sequence<T>.scanIndexed(initial: R, operation: (index: Int, acc: R, T) -> R): Sequence<R> {
    return runningFoldIndexed(initial, operation)
}

/**
 * Returns the sum of all values produced by [selector] function applied to each element in the sequence.
 * The operation is _terminal_.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 */
public inline fun <T> Sequence<T>.sumBy(selector: (T) -> Int): Int {
    var sum: Int = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/**
 * Returns the sum of all values produced by [selector] function applied to each element in the sequence.
 * The operation is _terminal_.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 */
public inline fun <T> Sequence<T>.sumByDouble(selector: (T) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/**
 * Returns the sum of all values produced by [selector] function applied to each element in the sequence.
 * The operation is _terminal_.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@kotlin.jvm.JvmName("sumOfDouble")
@kotlin.internal.InlineOnly
public inline fun <T> Sequence<T>.sumOf(selector: (T) -> Double): Double {
    var sum: Double = 0.toDouble()
    for (element

```

in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n \*\n \* The operation is `_terminal_`.\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("sumOfInt")\n @kotlin.internal.InlineOnly\n public inline fun <T> Sequence<T>.sumOf(selector: (T) -> Int): Int {\n var sum: Int = 0.toInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n \*\n \* The operation is `_terminal_`.\n \*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("sumOfLong")\n @kotlin.internal.InlineOnly\n public inline fun <T> Sequence<T>.sumOf(selector: (T) -> Long): Long {\n var sum: Long = 0.toLong()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n \*\n \* The operation is `_terminal_`.\n \*\n @SinceKotlin("1.5")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("sumOfUInt")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n public inline fun <T> Sequence<T>.sumOf(selector: (T) -> UInt): UInt {\n var sum: UInt = 0.toUInt()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns the sum of all values produced by [selector] function applied to each element in the sequence.\n \*\n \* The operation is `_terminal_`.\n \*\n @SinceKotlin("1.5")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolutionByLambdaReturnType\n @kotlin.jvm.JvmName("sumOfULong")\n @WasExperimental(ExperimentalUnsignedTypes::class)\n @kotlin.internal.InlineOnly\n public inline fun <T> Sequence<T>.sumOf(selector: (T) -> ULong): ULong {\n var sum: ULong = 0.toULong()\n for (element in this) {\n sum += selector(element)\n }\n return sum\n}\n\n/\*\*\n \* Returns an original collection containing all the non-`null` elements, throwing an [IllegalArgumentException] if there are any `null` elements.\n \*\n \* The operation is `_intermediate_` and `_stateless_`.\n \*\n public fun <T : Any> Sequence<T?>.requireNonNulls(): Sequence<T> {\n return map { it ?: throw IllegalArgumentException("null element found in \$this.") }\n}\n\n/\*\*\n \* Splits this sequence into a sequence of lists each not exceeding the given [size].\n \*\n \* The last list in the resulting sequence may have fewer elements than the given [size].\n \*\n \* @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this sequence.\n \*\n \* The operation is `_intermediate_` and `_stateful_`.\n \*\n @sample samples.collections.Collections.Transformations.chunked\n \*\n @SinceKotlin("1.2")\n public fun <T> Sequence<T>.chunked(size: Int): Sequence<List<T>> {\n return windowed(size, size, partialWindows = true)\n}\n\n/\*\*\n \* Splits this sequence into several lists each not exceeding the given [size]\n \* and applies the given [transform] function to an each.\n \*\n \* @return sequence of results of the [transform] applied to an each list.\n \*\n \* Note that the list passed to the [transform] function is ephemeral and is valid only inside that function.\n \*\n \* You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n \*\n \* The last list may have fewer elements than the given [size].\n \*\n \* @param size the number of elements to take in each list, must be positive and can be greater than the number of elements in this sequence.\n \*\n \* The operation is `_intermediate_` and `_stateful_`.\n \*\n @sample samples.text.Strings.chunkedTransform\n \*\n @SinceKotlin("1.2")\n public fun <T, R> Sequence<T>.chunked(size: Int, transform: (List<T>) -> R): Sequence<R> {\n return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/\*\*\n \* Returns a sequence containing all elements of the original sequence without the first occurrence of the given [element].\n \*\n \* The operation is `_intermediate_` and `_stateless_`.\n \*\n public operator fun <T> Sequence<T>.minus(element: T): Sequence<T> {\n return object: Sequence<T> {\n override fun iterator(): Iterator<T> {\n var removed = false\n return this@minus.filter { if (!removed && it == element) {\n removed = true; false } else true }.iterator()\n }\n }\n}\n\n/\*\*\n \* Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] array.\n \*\n \* Note that the source sequence and the array being subtracted are iterated only when an `iterator` is requested from\n \* the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.\n \*\n \* Before Kotlin

1.6, the [elements] array may have been converted to a [HashSet] to speed up the operation, thus the elements were required to have a correct and stable implementation of hashCode() that didn't change between successive invocations. On JVM, you can enable this behavior back with the system property kotlin.collections.convert\_arg\_to\_set\_in\_removeAll set to true. The operation is \_intermediate\_ and \_stateful\_.

```

public operator fun <T> Sequence<T>.minus(elements: Array<out T>): Sequence<T> {
    if (elements.isEmpty()) return this
    return object: Sequence<T> {
        override fun iterator(): Iterator<T> {
            val other = elements.convertToSetForSetOperation()
            return this@minus.filterNot { it in other }.iterator()
        }
    }
}

```

Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] collection. Note that the source sequence and the collection being subtracted are iterated only when an iterator is requested from the resulting sequence. Changing any of them between successive calls to iterator may affect the result. Before Kotlin 1.6, the [elements] collection may have been converted to a [HashSet] to speed up the operation, thus the elements were required to have a correct and stable implementation of hashCode() that didn't change between successive invocations. On JVM, you can enable this behavior back with the system property kotlin.collections.convert\_arg\_to\_set\_in\_removeAll set to true. The operation is \_intermediate\_ and \_stateful\_.

```

public operator fun <T> Sequence<T>.minus(elements: Iterable<T>): Sequence<T> {
    return object: Sequence<T> {
        override fun iterator(): Iterator<T> {
            val other = elements.convertToSetForSetOperation()
            if (other.isEmpty())
                return this@minus.iterator()
            else
                return this@minus.filterNot { it in other }.iterator()
        }
    }
}

```

Returns a sequence containing all elements of original sequence except the elements contained in the given [elements] sequence. Note that the source sequence and the sequence being subtracted are iterated only when an iterator is requested from the resulting sequence. Changing any of them between successive calls to iterator may affect the result. The operation is \_intermediate\_ for this sequence and \_terminal\_ and \_stateful\_ for the [elements] sequence. Before Kotlin 1.6, the [elements] sequence may have been converted to a [HashSet] to speed up the operation, thus the elements were required to have a correct and stable implementation of hashCode() that didn't change between successive invocations. On JVM, you can enable this behavior back with the system property kotlin.collections.convert\_arg\_to\_set\_in\_removeAll set to true.

```

public operator fun <T> Sequence<T>.minus(elements: Sequence<T>): Sequence<T> {
    return object: Sequence<T> {
        override fun iterator(): Iterator<T> {
            val other = elements.convertToSetForSetOperation()
            if (other.isEmpty())
                return this@minus.iterator()
            else
                return this@minus.filterNot { it in other }.iterator()
        }
    }
}

```

Returns a sequence containing all elements of the original sequence without the first occurrence of the given [element]. The operation is \_intermediate\_ and \_stateless\_.

```

@kotlin.internal.InlineOnly
public inline fun <T> Sequence<T>.minusElement(element: T): Sequence<T> {
    return minus(element)
}

```

Splits the original sequence into pair of lists, where first list contains elements for which [predicate] yielded true, while second list contains elements for which [predicate] yielded false. The operation is \_terminal\_.

```

@sample.samples.collections.Sequences.Transformations.partition
public inline fun <T> Sequence<T>.partition(predicate: (T) -> Boolean): Pair<List<T>, List<T>> {
    val first = ArrayList<T>()
    val second = ArrayList<T>()
    for (element in this) {
        if (predicate(element)) {
            first.add(element)
        } else {
            second.add(element)
        }
    }
    return Pair(first, second)
}

```

Returns a sequence containing all elements of the original sequence and then the given [element]. The operation is \_intermediate\_ and \_stateless\_.

```

public operator fun <T> Sequence<T>.plus(element: T): Sequence<T> {
    return sequenceOf(this, sequenceOf(element)).flatten()
}

```

Returns a sequence containing all elements of original sequence and then all elements of the given [elements] array. Note that the source sequence and the array being added are iterated only when an iterator is requested from the resulting sequence. Changing any of them between successive calls to iterator may affect the result. The operation is \_intermediate\_ and \_stateless\_.

```

public operator fun <T> Sequence<T>.plus(elements: Array<out T>): Sequence<T> {
    return this.plus(elements.asList())
}

```

Returns a sequence containing all elements of original sequence and then all elements of the given [elements] collection. Note that the source sequence and the collection being added

are iterated only when an `iterator` is requested from the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.

The operation is `_intermediate_ and _stateless_`.

```

public operator fun <T> Sequence<T>.plus(elements: Iterable<T>): Sequence<T> {
    return sequenceOf(this, elements.asSequence()).flatten()
}

```

Returns a sequence containing all elements of original sequence and then all elements of the given [elements] sequence.

Note that the source sequence and the sequence being added are iterated only when an `iterator` is requested from the resulting sequence. Changing any of them between successive calls to `iterator` may affect the result.

The operation is `_intermediate_ and _stateless_`.

```

public operator fun <T> Sequence<T>.plus(elements: Sequence<T>): Sequence<T> {
    return sequenceOf(this, elements).flatten()
}

```

Returns a sequence containing all elements of the original sequence and then the given [element].

The operation is `_intermediate_ and _stateless_`.

```

@kotlin.internal.InlineOnly
public inline fun <T> Sequence<T>.plusElement(element: T): Sequence<T> {
    return plus(element)
}

```

Returns a sequence of snapshots of the window of the given [size] sliding along this sequence with the given [step], where each snapshot is a list.

Several last lists may have fewer elements than the given [size].

Both [size] and [step] must be positive and can be greater than the number of elements in this sequence.

@param size the number of elements to take in each window

@param step the number of elements to move the window forward by on an each step, by default 1

@param partialWindows controls whether or not to keep partial windows in the end if any, by default `false` which means partial windows won't be preserved

@sample samples.collections.Sequences.Transformations.takeWindows

```

@SinceKotlin("1.2")
public fun <T> Sequence<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): Sequence<List<T>> {
    return windowedSequence(size, step, partialWindows, reuseBuffer = false)
}

```

Returns a sequence of results of applying the given [transform] function to an each list representing a view over the window of the given [size] sliding along this sequence with the given [step].

Note that the list passed to the [transform] function is ephemeral and is valid only inside that function. You should not store it or allow it to escape in some way, unless you made a snapshot of it.

Several last lists may have fewer elements than the given [size].

Both [size] and [step] must be positive and can be greater than the number of elements in this sequence.

@param size the number of elements to take in each window

@param step the number of elements to move the window forward by on an each step, by default 1

@param partialWindows controls whether or not to keep partial windows in the end if any, by default `false` which means partial windows won't be preserved

@sample samples.collections.Sequences.Transformations.averageWindows

```

@SinceKotlin("1.2")
public fun <T, R> Sequence<T>.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (List<T>) -> R): Sequence<R> {
    return windowedSequence(size, step, partialWindows, reuseBuffer = true).map(transform)
}

```

Returns a sequence of values built from the elements of `this` sequence and the [other] sequence with the same index.

The resulting sequence ends as soon as the shortest input sequence ends.

The operation is `_intermediate_ and _stateless_`.

@sample samples.collections.Sequences.Transformations.zip

```

public infix fun <T, R> Sequence<T>.zip(other: Sequence<R>): Sequence<Pair<T, R>> {
    return MergingSequence(this, other) { t1, t2 -> t1 to t2 }
}

```

Returns a sequence of values built from the elements of `this` sequence and the [other] sequence with the same index using the provided [transform] function applied to each pair of elements.

The resulting sequence ends as soon as the shortest input sequence ends.

The operation is `_intermediate_ and _stateless_`.

@sample samples.collections.Sequences.Transformations.zipWithTransform

```

public fun <T, R, V> Sequence<T>.zip(other: Sequence<R>, transform: (a: T, b: R) -> V): Sequence<V> {
    return MergingSequence(this, other, transform)
}

```

Returns a sequence of pairs of each two adjacent elements in this sequence.

The returned sequence is empty if this sequence contains less than two elements.

The operation is `_intermediate_ and _stateless_`.

@sample samples.collections.Collections.Transformations.zipWithNext

```

@SinceKotlin("1.2")
public fun <T> Sequence<T>.zipWithNext(): Sequence<Pair<T, T>> {
    return zipWithNext { a, b -> a to b }
}

```

Returns a sequence containing the results of applying the given [transform] function to an each pair of two

adjacent elements in this sequence.

`zipWithNextToFindDeltas`

`@sample`

```

samples.collections.Collections.Transformations.zipWithNextToFindDeltas
fun <T, R> Sequence<T>.zipWithNext(transform: (a: T, b: T) -> R): Sequence<R> {
    return sequenceResult@
    {
        val iterator = iterator()
        if (!iterator.hasNext()) return@result
        var current = iterator.next()
        while (iterator.hasNext()) {
            val next = iterator.next()
            yield(transform(current, next))
            current = next
        }
    }
}

```

`zipWithNext`

`Appends the string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.`

`If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").`

`The operation is _terminal_.`

`@sample`

```

samples.collections.Collections.Transformations.joinTo
fun <T, A : Appendable>
Sequence<T>.joinTo(buffer: A, separator: CharSequence = ",", prefix: CharSequence = "\\", postfix:
CharSequence = "\\", limit: Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): A
{
    buffer.append(prefix)
    var count = 0
    for (element in this) {
        if (++count > 1)
            buffer.append(separator)
        if (limit < 0 || count <= limit) {
            buffer.appendElement(element, transform)
        } else break
    }
    if (limit >= 0 && count > limit) buffer.append(truncated)
    buffer.append(postfix)
    return buffer
}

```

`Creates a string from all the elements separated using [separator] and using the given [prefix] and [postfix] if supplied.`

`If the collection could be huge, you can specify a non-negative value of [limit], in which case only the first [limit] elements will be appended, followed by the [truncated] string (which defaults to "...").`

`The operation is _terminal_.`

`@sample`

```

samples.collections.Collections.Transformations.joinToString
fun <T>
Sequence<T>.joinToString(separator: CharSequence = ",", prefix: CharSequence = "\\", postfix: CharSequence =
"\\", limit: Int = -1, truncated: CharSequence = "...", transform: ((T) -> CharSequence)? = null): String {
    return
    joinTo(StringBuilder(), separator, prefix, postfix, limit, truncated, transform).toString()
}

```

`Creates an [Iterable] instance that wraps the original sequence returning its elements when being iterated.`

`public fun <T> Sequence<T>.asIterable(): Iterable<T> { return Iterable { this.iterator() } }`

`Returns this sequence as a [Sequence].`

`@kotlin.internal.InlineOnly`

```

public inline fun <T> Sequence<T>.asSequence(): Sequence<T>
{
    return this
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfByte")
public fun Sequence<Byte>.average(): Double {
    var sum: Double = 0.0
    var count: Int = 0
    for (element in this) {
        sum += element
        checkCountOverflow(++count)
    }
    return if (count == 0) Double.NaN else sum / count
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfShort")
public fun Sequence<Short>.average(): Double {
    var sum:
Double = 0.0
    var count: Int = 0
    for (element in this) {
        sum += element
        checkCountOverflow(++count)
    }
    return if (count == 0) Double.NaN else sum / count
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfInt")
public fun Sequence<Int>.average(): Double {
    var sum: Double
= 0.0
    var count: Int = 0
    for (element in this) {
        sum += element
        checkCountOverflow(++count)
    }
    return if (count == 0) Double.NaN else sum / count
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfLong")
public fun
Sequence<Long>.average(): Double {
    var sum: Double = 0.0
    var count: Int = 0
    for (element in this) {
        sum += element
        checkCountOverflow(++count)
    }
    return if (count == 0) Double.NaN else sum /
count
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfFloat")
public fun Sequence<Float>.average(): Double {
    var sum:
Double = 0.0
    var count: Int = 0
    for (element in this) {
        sum += element
        checkCountOverflow(++count)
    }
    return if (count == 0) Double.NaN else sum / count
}

```

`Returns an average value of elements in the sequence.`

`The operation is _terminal_.`

```

@kotlin.jvm.JvmName("averageOfDouble")
public fun Sequence<Double>.average(): Double {
    var sum:

```



```

with the system property `kotlin.collections.convert_arg_to_set_in_removeAll` set to `true`.
public operator fun <T> Set<T>.minus(elements: Sequence<T>): Set<T> {
    val result = LinkedHashSet<T>(this)
    result.removeAll(elements)
    return result
}
Returns a set containing all elements of the original set except the given [element].
The returned set preserves the element iteration order of the original set.
@kotlin.internal.InlineOnly
public inline fun <T> Set<T>.minusElement(element: T): Set<T> {
    return minus(element)
}
Returns a set containing all elements of the original set and then the given [element] if it isn't already in this set.
The returned set preserves the element iteration order of the original set.
public operator fun <T> Set<T>.plus(element: T): Set<T> {
    val result = LinkedHashSet<T>(mapCapacity(size + 1))
    result.addAll(this)
    result.add(element)
    return result
}
Returns a set containing all elements of the original set and the given [elements] array, which aren't already in this set.
The returned set preserves the element iteration order of the original set.
public operator fun <T> Set<T>.plus(elements: Array<out T>): Set<T> {
    val result = LinkedHashSet<T>(mapCapacity(this.size + elements.size))
    result.addAll(this)
    result.addAll(elements)
    return result
}
Returns a set containing all elements of the original set and the given [elements] collection, which aren't already in this set.
The returned set preserves the element iteration order of the original set.
public operator fun <T> Set<T>.plus(elements: Iterable<T>): Set<T> {
    val result = LinkedHashSet<T>(mapCapacity(elements.collectionSizeOrNull()?.let { this.size + it } ?: this.size * 2))
    result.addAll(this)
    result.addAll(elements)
    return result
}
Returns a set containing all elements of the original set and the given [elements] sequence, which aren't already in this set.
The returned set preserves the element iteration order of the original set.
public operator fun <T> Set<T>.plus(elements: Sequence<T>): Set<T> {
    val result = LinkedHashSet<T>(mapCapacity(this.size * 2))
    result.addAll(this)
    result.addAll(elements)
    return result
}
Returns a set containing all elements of the original set and then the given [element] if it isn't already in this set.
The returned set preserves the element iteration order of the original set.
@kotlin.internal.InlineOnly
public inline fun <T> Set<T>.plusElement(element: T): Set<T> {
    return plus(element)
}
Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
@file:kotlin.jvm.JvmMultifileClass
@file:kotlin.jvm.JvmName("StringsKt")
package kotlin.text
NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt
See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib
import kotlin.random.*
Returns a character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char sequence.
@sample samples.collections.Collections.Elements.elementAt
public expect fun CharSequence.elementAt(index: Int): Char
Returns a character at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this char sequence.
@sample samples.collections.Collections.Elements.elementAtOrElse
@kotlin.internal.InlineOnly
public inline fun CharSequence.elementAtOrElse(index: Int, defaultValue: (Int) -> Char): Char {
    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)
}
Returns a character at the given [index] or `null` if the [index] is out of bounds of this char sequence.
@sample samples.collections.Collections.Elements.elementAtOrNull
@kotlin.internal.InlineOnly
public inline fun CharSequence.elementAtOrNull(index: Int): Char? {
    return this.getOrNull(index)
}
Returns the first character matching the given [predicate], or `null` if no such character was found.
@sample samples.collections.Collections.Elements.find
@kotlin.internal.InlineOnly
public inline fun CharSequence.find(predicate: (Char) -> Boolean): Char? {
    return firstOrNull(predicate)
}
Returns the last character matching the given [predicate], or `null` if no such character was found.
@sample samples.collections.Collections.Elements.findLast
@kotlin.internal.InlineOnly
public inline fun CharSequence.findLast(predicate: (Char) -> Boolean): Char? {
    return lastOrNull(predicate)
}
Returns first character.
@throws [NoSuchElementException] if the char sequence is empty.
public fun CharSequence.first(): Char {
    if (isEmpty())
        throw NoSuchElementException("Char sequence is

```

```

empty.}\n return this[0]\n}\n\n/**\n * Returns the first character matching the given [predicate].\n * @throws
[NoSuchElementException] if no such character is found.\n */\npublic inline fun CharSequence.first(predicate:
(Char) -> Boolean): Char {\n for (element in this) if (predicate(element)) return element\n throw
NoSuchElementException("Char sequence contains no character matching the predicate.}\n}\n\n/**\n * Returns
the first non-null value produced by [transform] function being applied to characters of this char sequence in
iteration order.\n * or throws [NoSuchElementException] if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*/\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <R : Any>
CharSequence.firstNotNullOf(transform: (Char) -> R?): R {\n return firstNotNullOfOrNull(transform) ?: throw
NoSuchElementException("No element of the char sequence was transformed to a non-null value.}\n}\n\n/**\n *
Returns the first non-null value produced by [transform] function being applied to characters of this char sequence in
iteration order.\n * or `null` if no non-null value was produced.\n * \n * @sample
samples.collections.Collections.Transformations.firstNotNullOf\n
*/\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun <R : Any>
CharSequence.firstNotNullOfOrNull(transform: (Char) -> R?): R? {\n for (element in this) {\n val result =
transform(element)\n if (result != null) {\n return result\n }\n }\n return null}\n}\n\n/**\n *
Returns the first character, or `null` if the char sequence is empty.\n */\npublic fun CharSequence.firstOrNull():
Char? {\n return if (isEmpty()) null else this[0]\n}\n\n/**\n * Returns the first character matching the given
[predicate], or `null` if character was not found.\n */\npublic inline fun CharSequence.firstOrNull(predicate: (Char) -
> Boolean): Char? {\n for (element in this) if (predicate(element)) return element\n return null}\n}\n\n/**\n *
Returns a character at the given [index] or the result of calling the [defaultValue] function if the [index] is out of
bounds of this char sequence.\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.getOrNull(index:
Int, defaultValue: (Int) -> Char): Char {\n return if (index >= 0 && index <= lastIndex) get(index) else
defaultValue(index)\n}\n\n/**\n * Returns a character at the given [index] or `null` if the [index] is out of bounds of
this char sequence.\n * \n * @sample samples.collections.Collections.Elements.getOrNull\n */\npublic fun
CharSequence.getOrNull(index: Int): Char? {\n return if (index >= 0 && index <= lastIndex) get(index) else
null}\n}\n\n/**\n * Returns index of the first character matching the given [predicate], or -1 if the char sequence does
not contain such character.\n */\npublic inline fun CharSequence.indexOfFirst(predicate: (Char) -> Boolean): Int {\n
for (index in indices) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -
1}\n}\n\n/**\n * Returns index of the last character matching the given [predicate], or -1 if the char sequence does
not contain such character.\n */\npublic inline fun CharSequence.indexOfLast(predicate: (Char) -> Boolean): Int {\n
for (index in indices.reversed()) {\n if (predicate(this[index])) {\n return index\n }\n }\n return -
1}\n}\n\n/**\n * Returns the last character.\n * \n * @throws NoSuchElementException if the char sequence is
empty.\n * \n * @sample samples.text.Strings.last\n */\npublic fun CharSequence.last(): Char {\n if (isEmpty())\n throw NoSuchElementException("Char sequence is empty.}\n return this[lastIndex]\n}\n\n/**\n * Returns the
last character matching the given [predicate].\n * \n * @throws NoSuchElementException if no such character is
found.\n * \n * @sample samples.text.Strings.last\n */\npublic inline fun CharSequence.last(predicate: (Char) ->
Boolean): Char {\n for (index in this.indices.reversed()) {\n val element = this[index]\n if
(predicate(element)) return element\n }\n throw NoSuchElementException("Char sequence contains no
character matching the predicate.}\n}\n\n/**\n * Returns the last character, or `null` if the char sequence is
empty.\n * \n * @sample samples.text.Strings.last\n */\npublic fun CharSequence.lastOrNull(): Char? {\n return if
(isEmpty()) null else this[length - 1]\n}\n\n/**\n * Returns the last character matching the given [predicate], or `null`
if no such character was found.\n * \n * @sample samples.text.Strings.last\n */\npublic inline fun
CharSequence.lastOrNull(predicate: (Char) -> Boolean): Char? {\n for (index in this.indices.reversed()) {\n
val element = this[index]\n if (predicate(element)) return element\n }\n return null}\n}\n\n/**\n * Returns a
random character from this char sequence.\n * \n * @throws NoSuchElementException if this char sequence is
empty.\n */\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.random(): Char
{\n return random(Random)\n}\n\n/**\n * Returns a random character from this char sequence using the specified

```

```

source of randomness.\n * \n * @throws NoSuchElementException if this char sequence is empty.\n
*\n@SinceKotlin("1.3")\npublic fun CharSequence.random(random: Random): Char {\n    if (isEmpty())\n        throw NoSuchElementException("Char sequence is empty.")\n    return get(random.nextInt(length))\n}\n\n/**\n * Returns a random character from this char sequence, or `null` if this char sequence is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.randomOrNull(): Char? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random character from this char sequence using the specified source of randomness, or `null` if this char sequence is empty.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun CharSequence.randomOrNull(random: Random): Char? {\n    if (isEmpty())\n        return null\n    return get(random.nextInt(length))\n}\n\n/**\n * Returns the single character, or throws an exception if the char sequence is empty or has more than one character.\n
*\npublic fun CharSequence.single(): Char {\n    return when (length) {\n        0 -> throw NoSuchElementException("Char sequence is empty.")\n        1 -> this[0]\n        else -> throw IllegalArgumentException("Char sequence has more than one element.")\n    }\n}\n\n/**\n * Returns the single character matching the given [predicate], or throws exception if there is no or more than one matching character.\n
*\npublic inline fun CharSequence.single(predicate: (Char) -> Boolean): Char {\n    var single: Char? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) throw\n                IllegalArgumentException("Char sequence contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if (!found) throw NoSuchElementException("Char sequence contains no character matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as Char\n}\n\n/**\n * Returns single character, or `null` if the char sequence is empty or has more than one character.\n
*\npublic fun CharSequence.singleOrNull(): Char? {\n    return if (length == 1) this[0] else null\n}\n\n/**\n * Returns the single character matching the given [predicate], or `null` if character was not found or more than one character was found.\n
*\npublic inline fun CharSequence.singleOrNull(predicate: (Char) -> Boolean): Char? {\n    var single: Char? = null\n    var found = false\n    for (element in this) {\n        if (predicate(element)) {\n            if (found) return null\n            single = element\n            found = true\n        }\n    }\n    if (!found) return null\n    return single\n}\n\n/**\n * Returns a subsequence of this char sequence with the first [n] characters removed.\n
*\n * @throws IllegalArgumentException if [n] is negative.\n
*\n * @sample samples.text.Strings.drop\n
*\npublic fun CharSequence.drop(n: Int): CharSequence {\n    require(n >= 0) { "Requested character count $n is less than zero." }\n    return subSequence(n.coerceAtMost(length), length)\n}\n\n/**\n * Returns a string with the first [n] characters removed.\n
*\n * @throws IllegalArgumentException if [n] is negative.\n
*\n * @sample samples.text.Strings.drop\n
*\npublic fun String.drop(n: Int): String {\n    require(n >= 0) { "Requested character count $n is less than zero." }\n    return substring(n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence with the last [n] characters removed.\n
*\n * @throws IllegalArgumentException if [n] is negative.\n
*\n * @sample samples.text.Strings.drop\n
*\npublic fun CharSequence.dropLast(n: Int): CharSequence {\n    require(n >= 0) { "Requested character count $n is less than zero." }\n    return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a string with the last [n] characters removed.\n
*\n * @throws IllegalArgumentException if [n] is negative.\n
*\n * @sample samples.text.Strings.drop\n
*\npublic fun String.dropLast(n: Int): String {\n    require(n >= 0) { "Requested character count $n is less than zero." }\n    return take((length - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a subsequence of this char sequence containing all characters except last characters that satisfy the given [predicate].\n
*\n * @sample samples.text.Strings.drop\n
*\npublic inline fun CharSequence.dropLastWhile(predicate: (Char) -> Boolean): CharSequence {\n    for (index in lastIndex downTo 0)\n        if (!predicate(this[index]))\n            return subSequence(0, index + 1)\n    return ""\n}\n\n/**\n * Returns a string containing all characters except last characters that satisfy the given [predicate].\n
*\n * @sample samples.text.Strings.drop\n
*\npublic inline fun String.dropLastWhile(predicate: (Char) -> Boolean): String {\n    for (index in lastIndex downTo 0)\n        if (!predicate(this[index]))\n            return substring(0, index + 1)\n    return ""\n}\n\n/**\n * Returns a subsequence of this char sequence containing all characters except first characters that satisfy the given [predicate].\n
*\n * @sample samples.text.Strings.drop\n
*\npublic inline fun CharSequence.dropWhile(predicate: (Char) -> Boolean): CharSequence {\n    for (index in

```



```

CharSequence).slice(indices).toString()\n\n/**\n * Returns a subsequence of this char sequence containing the
first [n] characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
CharSequence.take(n: Int): CharSequence {\n    require(n >= 0) { \"Requested character count $n is less than zero.\"
}\n    return subSequence(0, n.coerceAtMost(length))\n}\n\n/**\n * Returns a string containing the first [n]
characters from this string, or the entire string if this string is shorter.\n * \n * @throws IllegalArgumentException if
[n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun String.take(n: Int): String {\n    require(n
>= 0) { \"Requested character count $n is less than zero.\" }\n    return substring(0,
n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this char sequence containing the last [n]
characters from this char sequence, or the entire char sequence if this char sequence is shorter.\n * \n * @throws
IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
CharSequence.takeLast(n: Int): CharSequence {\n    require(n >= 0) { \"Requested character count $n is less than
zero.\" }\n    val length = length\n    return subSequence(length - n.coerceAtMost(length), length)\n}\n\n/**\n *
Returns a string containing the last [n] characters from this string, or the entire string if this string is shorter.\n * \n *
@throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.text.Strings.take\n */\npublic fun
String.takeLast(n: Int): String {\n    require(n >= 0) { \"Requested character count $n is less than zero.\" }\n    val
length = length\n    return substring(length - n.coerceAtMost(length))\n}\n\n/**\n * Returns a subsequence of this
char sequence containing last characters that satisfy the given [predicate].\n * \n * @sample
samples.text.Strings.take\n */\npublic inline fun CharSequence.takeLastWhile(predicate: (Char) -> Boolean):
CharSequence {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return
subSequence(index + 1, length)\n        }\n    }\n    return subSequence(0, length)\n}\n\n/**\n * Returns a string
containing last characters that satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic
inline fun String.takeLastWhile(predicate: (Char) -> Boolean): String {\n    for (index in lastIndex downTo 0) {\n
        if (!predicate(this[index])) {\n            return substring(index + 1)\n        }\n    }\n    return this\n}\n\n/**\n * Returns
a subsequence of this char sequence containing the first characters that satisfy the given [predicate].\n * \n *
@sample samples.text.Strings.take\n */\npublic inline fun CharSequence.takeWhile(predicate: (Char) -> Boolean):
CharSequence {\n    for (index in 0 until length)\n        if (!predicate(get(index))) {\n            return subSequence(0,
index)\n        }\n    return subSequence(0, length)\n}\n\n/**\n * Returns a string containing the first characters that
satisfy the given [predicate].\n * \n * @sample samples.text.Strings.take\n */\npublic inline fun
String.takeWhile(predicate: (Char) -> Boolean): String {\n    for (index in 0 until length)\n        if
(!predicate(get(index))) {\n            return substring(0, index)\n        }\n    return this\n}\n\n/**\n * Returns a char
sequence with characters in reversed order.\n */\npublic fun CharSequence.reversed(): CharSequence {\n    return
StringBuilder(this).reverse()\n}\n\n/**\n * Returns a string with characters in reversed order.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.reversed(): String {\n    return (this as
CharSequence).reversed().toString()\n}\n\n/**\n * Returns a [Map] containing key-value pairs provided by
[transform] function\n * applied to characters of the given char sequence.\n * \n * If any of two pairs would have the
same key the last one gets added to the map.\n * \n * The returned map preserves the entry iteration order of the
original char sequence.\n * \n * @sample samples.text.Strings.associate\n */\npublic inline fun <K, V>
CharSequence.associate(transform: (Char) -> Pair<K, V>): Map<K, V> {\n    val capacity =
mapCapacity(length).coerceAtLeast(16)\n    return associateTo(LinkedHashMap<K, V>(capacity),
transform)\n}\n\n/**\n * Returns a [Map] containing the characters from the given char sequence indexed by the
key\n * returned from [keySelector] function applied to each character.\n * \n * If any two characters would have the
same key returned by [keySelector] the last one gets added to the map.\n * \n * The returned map preserves the entry
iteration order of the original char sequence.\n * \n * @sample samples.text.Strings.associateBy\n */\npublic inline
fun <K> CharSequence.associateBy(keySelector: (Char) -> K): Map<K, Char> {\n    val capacity =
mapCapacity(length).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, Char>(capacity),
keySelector)\n}\n\n/**\n * Returns a [Map] containing the values provided by [valueTransform] and indexed by
[keySelector] functions applied to characters of the given char sequence.\n * \n * If any two characters would have

```

the same key returned by [keySelector] the last one gets added to the map.\n \* \n \* The returned map preserves the entry iteration order of the original char sequence.\n \* \n \* @sample

```

samples.text.Strings.associateByWithValueTransform\n *\npublic inline fun <K, V>
CharSequence.associateBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, V> {\n    val capacity
= mapCapacity(length).coerceAtLeast(16)\n    return associateByTo(LinkedHashMap<K, V>(capacity),
keySelector, valueTransform)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value
pairs,\n * where key is provided by the [keySelector] function applied to each character of the given char sequence\n
* and value is the character itself.\n * \n * If any two characters would have the same key returned by [keySelector]
the last one gets added to the map.\n * \n * @sample samples.text.Strings.associateByTo\n *\npublic inline fun <K,
M : MutableMap<in K, in Char>> CharSequence.associateByTo(destination: M, keySelector: (Char) -> K): M {\n
for (element in this) {\n    destination.put(keySelector(element), element)\n    }\n    return destination\n}\n\n/**\n
* Populates and returns the [destination] mutable map with key-value pairs,\n * where key is provided by the
[keySelector] function and\n * and value is provided by the [valueTransform] function applied to characters of the
given char sequence.\n * \n * If any two characters would have the same key returned by [keySelector] the last one
gets added to the map.\n * \n * @sample samples.text.Strings.associateByToWithValueTransform\n *\npublic
inline fun <K, V, M : MutableMap<in K, in V>> CharSequence.associateByTo(destination: M, keySelector: (Char)
-> K, valueTransform: (Char) -> V): M {\n    for (element in this) {\n    destination.put(keySelector(element),
valueTransform(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable
map with key-value pairs\n * provided by [transform] function applied to each character of the given char
sequence.\n * \n * If any of two pairs would have the same key the last one gets added to the map.\n * \n * @sample
samples.text.Strings.associateTo\n *\npublic inline fun <K, V, M : MutableMap<in K, in V>>
CharSequence.associateTo(destination: M, transform: (Char) -> Pair<K, V>): M {\n    for (element in this) {\n
destination += transform(element)\n    }\n    return destination\n}\n\n/**\n * Returns a [Map] where keys are
characters from the given char sequence and values are\n * produced by the [valueSelector] function applied to each
character.\n * \n * If any two characters are equal, the last one gets added to the map.\n * \n * The returned map
preserves the entry iteration order of the original char sequence.\n * \n * @sample
samples.text.Strings.associateWith\n *\n@SinceKotlin("1.3")\npublic inline fun <V>
CharSequence.associateWith(valueSelector: (Char) -> V): Map<Char, V> {\n    val result = LinkedHashMap<Char,
V>(mapCapacity(length).coerceAtMost(128)).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each
character of the given char sequence,\n * where key is the character itself and value is provided by the
[valueSelector] function applied to that key.\n * \n * If any two characters are equal, the last one overwrites the
former value in the map.\n * \n * @sample samples.text.Strings.associateWithTo\n
*\n@SinceKotlin("1.3")\npublic inline fun <V, M : MutableMap<in Char, in V>>
CharSequence.associateWithTo(destination: M, valueSelector: (Char) -> V): M {\n    for (element in this) {\n
destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Appends all characters to
the given [destination] collection.\n *\npublic fun <C : MutableCollection<in Char>>
CharSequence.toCollection(destination: C): C {\n    for (item in this) {\n    destination.add(item)\n    }\n    return
destination\n}\n\n/**\n * Returns a new [HashSet] of all characters.\n *\npublic fun CharSequence.toHashSet():
HashSet<Char> {\n    return toCollection(HashSet<Char>(mapCapacity(length).coerceAtMost(128)))\n}\n\n/**\n
* Returns a [List] containing all characters.\n *\npublic fun CharSequence.toList(): List<Char> {\n    return when
(length) {\n    0 -> emptyList()\n    1 -> listOf(this[0])\n    else -> this.toMutableList()\n    }\n}\n\n/**\n
* Returns a new [MutableList] filled with all characters of this char sequence.\n *\npublic fun
CharSequence.toMutableList(): MutableList<Char> {\n    return toCollection(ArrayList<Char>(length))\n}\n\n/**\n
* Returns a [Set] of all characters.\n * \n * The returned set preserves the element iteration order of the original
char sequence.\n *\npublic fun CharSequence.toSet(): Set<Char> {\n    return when (length) {\n    0 -> emptySet()\n
1 -> setOf(this[0])\n    else -> toCollection(LinkedHashSet<Char>(mapCapacity(length).coerceAtMost(128)))\n
}\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being invoked on

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each character of original char sequence.\n \* \n \* @sample

```

samples.collections.Collections.Transformations.flatMap\n * \n public inline fun <R>
CharSequence.flatMap(transform: (Char) -> Iterable<R>): List<R> {\n return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each character\n * and its index in the original char sequence.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIndexedIterable")\n @kotlin.internal.InlineOnly\n public
inline fun <R> CharSequence.flatMapIndexed(transform: (index: Int, Char) -> Iterable<R>): List<R> {\n return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each character\n * and its index in the original char sequence, to the given
[destination].\n
*\n @SinceKotlin("1.4")\n @OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n @OverloadResolution
ByLambdaReturnType\n @kotlin.jvm.JvmName("flatMapIndexedIterableTo")\n @kotlin.internal.InlineOnly\n public
c inline fun <R, C : MutableCollection<in R>> CharSequence.flatMapIndexedTo(destination: C, transform: (index:
Int, Char) -> Iterable<R>): C {\n var index = 0\n for (element in this) {\n val list = transform(index++,
element)\n destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Appends all elements yielded from
results of [transform] function being invoked on each character of original char sequence, to the given
[destination].\n
*\n public inline fun <R, C : MutableCollection<in R>> CharSequence.flatMapTo(destination: C,
transform: (Char) -> Iterable<R>): C {\n for (element in this) {\n val list = transform(element)\n
destination.addAll(list)\n }\n return destination\n}\n\n/**\n * Groups characters of the original char sequence by
the key returned by the given [keySelector] function\n * applied to each character and returns a map where each
group key is associated with a list of corresponding characters.\n * \n * The returned map preserves the entry
iteration order of the keys produced from the original char sequence.\n * \n * @sample
samples.collections.Collections.Transformations.groupBy\n * \n public inline fun <K>
CharSequence.groupBy(keySelector: (Char) -> K): Map<K, List<Char>> {\n return
groupByTo(LinkedHashMap<K, MutableList<Char>>(), keySelector)\n}\n\n/**\n * Groups values returned by the
[valueTransform] function applied to each character of the original char sequence\n * by the key returned by the
given [keySelector] function applied to the character\n * and returns a map where each group key is associated with
a list of corresponding values.\n * \n * The returned map preserves the entry iteration order of the keys produced
from the original char sequence.\n * \n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n * \n public inline fun <K, V>
CharSequence.groupBy(keySelector: (Char) -> K, valueTransform: (Char) -> V): Map<K, List<V>> {\n return
groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/**\n * Groups
characters of the original char sequence by the key returned by the given [keySelector] function\n * applied to each
character and puts to the [destination] map each group key associated with a list of corresponding characters.\n * \n
*\n * @return The [destination] map.\n * \n * @sample samples.collections.Collections.Transformations.groupBy\n
*\n public inline fun <K, M : MutableMap<in K, MutableList<Char>>> CharSequence.groupByTo(destination: M,
keySelector: (Char) -> K): M {\n for (element in this) {\n val key = keySelector(element)\n val list =
destination.getOrPut(key) { ArrayList<Char>() }\n list.add(element)\n }\n return destination\n}\n\n/**\n *
Groups values returned by the [valueTransform] function applied to each character of the original char sequence\n *
by the key returned by the given [keySelector] function applied to the character\n * and puts to the [destination]
map each group key associated with a list of corresponding values.\n * \n * @return The [destination] map.\n * \n *
@sample samples.collections.Collections.Transformations.groupByKeysAndValues\n * \n public inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> CharSequence.groupByTo(destination: M, keySelector: (Char) -> K,
valueTransform: (Char) -> V): M {\n for (element in this) {\n val key = keySelector(element)\n val list =
destination.getOrPut(key) { ArrayList<V>() }\n list.add(valueTransform(element))\n }\n return
destination\n}\n\n/**\n * Creates a [Grouping] source from a char sequence to be used later with one of group-and-

```

fold operations\n \* using the specified [keySelector] function to extract a key from each character.\n \* \n \* @sample samples.collections.Grouping.groupingByEachCount\n \* \n \* @SinceKotlin("1.1")\n \* public inline fun <K> CharSequence.groupingBy(crossinline keySelector: (Char) -> K): Grouping<Char, K> {\n \* return object : Grouping<Char, K> {\n \* override fun sourceIterator(): Iterator<Char> = this@groupingBy.iterator()\n \* override fun keyOf(element: Char): K = keySelector(element)\n \* } \n \* } \n \* \n \* Returns a list containing the results of applying the given [transform] function\n \* to each character in the original char sequence.\n \* \n \* @sample samples.text.Strings.map\n \* \n \* public inline fun <R> CharSequence.map(transform: (Char) -> R): List<R> {\n \* return mapTo(ArrayList<R>(length), transform)\n \* } \n \* \n \* Returns a list containing the results of applying the given [transform] function\n \* to each character and its index in the original char sequence.\n \* \n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \* \n \* public inline fun <R> CharSequence.mapIndexed(transform: (index: Int, Char) -> R): List<R> {\n \* return mapIndexedTo(ArrayList<R>(length), transform)\n \* } \n \* \n \* Returns a list containing only the non-null results of applying the given [transform] function\n \* to each character and its index in the original char sequence.\n \* \n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \* \n \* public inline fun <R : Any> CharSequence.mapIndexedNotNull(transform: (index: Int, Char) -> R?): List<R> {\n \* return mapIndexedNotNullTo(ArrayList<R>(), transform)\n \* } \n \* \n \* Applies the given [transform] function to each character and its index in the original char sequence\n \* and appends only the non-null results to the given [destination].\n \* \n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \* \n \* public inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapIndexedNotNullTo(destination: C, transform: (index: Int, Char) -> R?): C {\n \* forEachIndexed { index, element -> transform(index, element)?.let { destination.add(it) } }\n \* return destination\n \* } \n \* \n \* Applies the given [transform] function to each character and its index in the original char sequence\n \* and appends the results to the given [destination].\n \* \n \* @param [transform] function that takes the index of a character and the character itself\n \* and returns the result of the transform applied to the character.\n \* \n \* public inline fun <R, C : MutableCollection<in R>> CharSequence.mapIndexedTo(destination: C, transform: (index: Int, Char) -> R): C {\n \* var index = 0\n \* for (item in this)\n \* destination.add(transform(index++, item))\n \* return destination\n \* } \n \* \n \* Returns a list containing only the non-null results of applying the given [transform] function\n \* to each character in the original char sequence.\n \* \n \* @sample samples.collections.Collections.Transformations.mapNotNull\n \* \n \* public inline fun <R : Any> CharSequence.mapNotNull(transform: (Char) -> R?): List<R> {\n \* return mapNotNullTo(ArrayList<R>(), transform)\n \* } \n \* \n \* Applies the given [transform] function to each character in the original char sequence\n \* and appends only the non-null results to the given [destination].\n \* \n \* public inline fun <R : Any, C : MutableCollection<in R>> CharSequence.mapNotNullTo(destination: C, transform: (Char) -> R?): C {\n \* forEach { element -> transform(element)?.let { destination.add(it) } }\n \* return destination\n \* } \n \* \n \* Applies the given [transform] function to each character of the original char sequence\n \* and appends the results to the given [destination].\n \* \n \* public inline fun <R, C : MutableCollection<in R>> CharSequence.mapTo(destination: C, transform: (Char) -> R): C {\n \* for (item in this)\n \* destination.add(transform(item))\n \* return destination\n \* } \n \* \n \* Returns a lazy [Iterable] that wraps each character of the original char sequence\n \* into an [IndexedValue] containing the index of that character and the character itself.\n \* \n \* public fun CharSequence.withIndex(): Iterable<IndexedValue<Char>> {\n \* return IndexingIterable { iterator() }\n \* } \n \* \n \* Returns `true` if all characters match the given [predicate].\n \* \n \* @sample samples.collections.Collections.Aggregates.all\n \* \n \* public inline fun CharSequence.all(predicate: (Char) -> Boolean): Boolean {\n \* for (element in this) if (!predicate(element)) return false\n \* return true\n \* } \n \* \n \* Returns `true` if char sequence has at least one character.\n \* \n \* @sample samples.collections.Collections.Aggregates.any\n \* \n \* public fun CharSequence.any(): Boolean {\n \* return !isEmpty()\n \* } \n \* \n \* Returns `true` if at least one character matches the given [predicate].\n \* \n \* @sample samples.collections.Collections.Aggregates.anyWithPredicate\n \* \n \* public inline fun CharSequence.any(predicate:

```

(Char) -> Boolean): Boolean {
    for (element in this) if (predicate(element)) return true
    return false
}

Returns the length of this char sequence.
@kotlin.internal.InlineOnly
public inline fun CharSequence.count(): Int {
    return length
}

Returns the number of characters matching the given [predicate].
public inline fun CharSequence.count(predicate: (Char) -> Boolean): Int {
    var count = 0
    for (element in this) if (predicate(element)) ++count
    return count
}

Accumulates value starting with [initial] value and applying [operation] from left to right
to current accumulator value and each character.
@param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.
public inline fun <R> CharSequence.fold(initial: R, operation: (acc: R, Char) -> R): R {
    var accumulator = initial
    for (element in this) accumulator = operation(accumulator, element)
    return accumulator
}

Accumulates value starting with [initial] value and applying [operation] from left to right
to current accumulator value and each character with its index in the original char sequence.
@param [operation] function that takes the index of a character, current accumulator value
and the character itself, and calculates the next accumulator value.
public inline fun <R> CharSequence.foldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): R {
    var index = 0
    var accumulator = initial
    for (element in this) accumulator = operation(index++, accumulator, element)
    return accumulator
}

Accumulates value starting with [initial] value and applying [operation] from right to left
to each character and current accumulator value.
@param [operation] function that takes a character and current accumulator value, and calculates the next accumulator value.
public inline fun <R> CharSequence.foldRight(initial: R, operation: (Char, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

Accumulates value starting with [initial] value and applying [operation] from right to left
to each character with its index in the original char sequence and current accumulator value.
@param [operation] function that takes the index of a character, the character itself
and current accumulator value, and calculates the next accumulator value.
public inline fun <R> CharSequence.foldRightIndexed(initial: R, operation: (index: Int, Char, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

Performs the given [action] on each character.
public inline fun CharSequence.forEach(action: (Char) -> Unit): Unit {
    for (element in this) action(element)
}

Performs the given [action] on each character, providing sequential index with the character.
@param [action] function that takes the index of a character and the character itself
and performs the action on the character.
public inline fun CharSequence.forEachIndexed(action: (index: Int, Char) -> Unit): Unit {
    var index = 0
    for (item in this) action(index++, item)
}

@Deprecated("Use maxOrNull instead.", ReplaceWith("this.maxOrNull()"))
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")
public fun CharSequence.max(): Char? {
    return maxOrNull()
}

@Deprecated("Use maxByOrNull instead.", ReplaceWith("this.maxByOrNull(selector)"))
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")
public inline fun <R : Comparable<R>> CharSequence.maxBy(selector: (Char) -> R): Char? {
    return maxByOrNull(selector)
}

Returns the first character yielding the largest value of the given function or `null` if there are no characters.
@sample
samples.collections.Collections.Aggregates.maxByOrNull
@SinceKotlin("1.4")
public inline fun <R : Comparable<R>> CharSequence.maxByOrNull(selector: (Char) -> R): Char? {
    if (isEmpty()) return null
    var maxElem = this[0]
    val lastIndex = this.lastIndex
    if (lastIndex == 0) return maxElem
    var maxValue = selector(maxElem)
    for (i in 1..lastIndex) {
        val e = this[i]
        val v = selector(e)
        if (maxValue < v) {
            maxElem = e
            maxValue = v
        }
    }
    return maxElem
}

Returns the largest value among all values produced by [selector] function
applied to each character in the char sequence.
If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.
@throws

```

NoSuchElementException if the char sequence is empty.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOf(selector: (Char) ->\nDouble): Double {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence.\n * \n * If any of values produced by [selector] function is `NaN`, the returned\n * result is `NaN`.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOf(selector: (Char) ->\nFloat): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i\n    in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nCharSequence.maxOf(selector: (Char) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values\n * produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no\n * characters.\n * \n * If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOfOrNull(selector:\n(Char) -> Double): Double? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in\n    1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no\n * characters.\n * \n * If any of values produced by\n * [selector] function is `NaN`, the returned result is `NaN`.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.maxOfOrNull(selector:\n(Char) -> Float): Float? {\n    if (isEmpty()) return null\n    var maxValue = selector(this[0])\n    for (i in\n    1..lastIndex) {\n        val v = selector(this[i])\n        maxValue = maxOf(maxValue, v)\n    }\n    return\n    maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no\n * characters.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nCharSequence.maxOfOrNull(selector: (Char) -> R): R? {\n    if (isEmpty()) return null\n    var maxValue =\n    selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided\n * [comparator]\n * among all values produced by [selector] function applied to each character in the char sequence.\n * \n * @throws NoSuchElementException if the char sequence is empty.\n */
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R> CharSequence.maxOfWith(comparator:\nComparator<in R>, selector: (Char) -> R): R {\n    if (isEmpty()) throw NoSuchElementException()\n    var\n    maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if\n        (comparator.compare(maxValue, v) < 0) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value according to the provided [comparator]\n * among all values produced by [selector]\n * function applied to each character in the char sequence or `null` if there are no characters.\n */
```

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R>
CharSequence.maxOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {\n if (isEmpty())
return null\n var max = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(max, v) < 0) {\n max = v\n }\n }\n return max\n}\n\n/**\n * Returns the largest character or `null` if there are no characters.\n */\n*\n@SinceKotlin("1.4")\npublic fun
CharSequence.maxOrNull(): Char? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex)
{\n val e = this[i]\n if (max < e) max = e\n }\n return max\n}\n\n@Deprecated("Use maxWithOrNull
instead.", ReplaceWith("this.maxWithOrNull(comparator)"))\n@DeprecatedSinceKotlin(warningSince = "1.4",
errorSince = "1.5", hiddenSince = "1.6")\npublic fun CharSequence.maxWith(comparator: Comparator<in
Char>): Char? {\n return maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first character having the largest
value according to the provided [comparator] or `null` if there are no characters.\n */\n*\n@SinceKotlin("1.4")\npublic fun CharSequence.maxWithOrNull(comparator: Comparator<in Char>): Char?
{\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if
(comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n@Deprecated("Use minOrNull instead.",
ReplaceWith("this.minOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\npublic fun CharSequence.min(): Char? {\n return minOrNull()\n}\n\n@Deprecated("Use
minByOrNull instead.", ReplaceWith("this.minByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince =
"1.4", errorSince = "1.5", hiddenSince = "1.6")\npublic inline fun <R : Comparable<R>>
CharSequence.minBy(selector: (Char) -> R): Char? {\n return minByOrNull(selector)\n}\n\n/**\n * Returns the
first character yielding the smallest value of the given function or `null` if there are no characters.\n */\n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n */\n*\n@SinceKotlin("1.4")\npublic inline fun <R :
Comparable<R>> CharSequence.minByOrNull(selector: (Char) -> R): Char? {\n if (isEmpty()) return null\n var
minElem = this[0]\n val lastIndex = this.lastIndex\n if (lastIndex == 0) return minElem\n var minValue =
selector(minElem)\n for (i in 1..lastIndex) {\n val e = this[i]\n val v = selector(e)\n if (minValue > v)
{\n minElem = e\n minValue = v\n }\n }\n return minElem\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each character in the char sequence.\n */\n * @throws
NoSuchElementException if any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * @throws
NoSuchElementException if the char sequence is empty.\n */\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOf(selector: (Char) ->
Double): Double {\n if (isEmpty()) throw NoSuchElementException()\n var min = selector(this[0])\n for
(i in 1..lastIndex) {\n val v = selector(this[i])\n min = minOf(min, v)\n }\n return
min\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each character in the char sequence.\n */\n * @throws NoSuchElementException if any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * @throws NoSuchElementException if the char sequence is empty.\n */\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.minOf(selector: (Char) ->
Float): Float {\n if (isEmpty()) throw NoSuchElementException()\n var min = selector(this[0])\n for
(i in 1..lastIndex) {\n val v = selector(this[i])\n min = minOf(min, v)\n }\n return
min\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to
each character in the char sequence.\n */\n * @throws NoSuchElementException if the char sequence is empty.\n */\n*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>
CharSequence.minOf(selector: (Char) -> R): R {\n if (isEmpty()) throw NoSuchElementException()\n var
min = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (min > v) {\n
min = v\n }\n }\n return min\n}\n\n/**\n * Returns the smallest value among all values
produced by [selector] function\n * applied to each character in the char sequence or `null` if there are no

```

characters. If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.

```

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun CharSequence.minOfOrNull(selector:
(Char) -> Double): Double? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return
minValue
}

```

Returns the smallest value among all values produced by [selector] function applied to each character in the char sequence or `null` if there are no characters.

If any of values produced by [selector] function is `NaN`, the returned result is `NaN`.

```

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun CharSequence.minOfOrNull(selector:
(Char) -> Float): Float? {
    if (isEmpty()) return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}

```

Returns the smallest value among all values produced by [selector] function applied to each character in the char sequence or `null` if there are no characters.

```

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun <R : Comparable<R>>
CharSequence.minOfOrNull(selector: (Char) -> R): R? {
    if (isEmpty()) return null
    var minValue =
selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}

```

Returns the smallest value according to the provided [comparator] among all values produced by [selector] function applied to each character in the char sequence.

@throws NoSuchElementException if the char sequence is empty.

```

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun <R> CharSequence.minOfWith(comparator:
Comparator<in R>, selector: (Char) -> R): R {
    if (isEmpty()) throw NoSuchElementException
    var
minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if
(comparator.compare(minValue, v) > 0) {
            minValue = v
        }
    }
    return minValue
}

```

Returns the smallest value according to the provided [comparator] among all values produced by [selector] function applied to each character in the char sequence or `null` if there are no characters.

```

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolution
ByLambdaReturnType
@kotlin.internal.InlineOnly
public inline fun <R>
CharSequence.minOfWithOrNull(comparator: Comparator<in R>, selector: (Char) -> R): R? {
    if (isEmpty())
return null
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if
(comparator.compare(minValue, v) > 0) {
            minValue = v
        }
    }
    return minValue
}

```

Returns the smallest character or `null` if there are no characters.

```

* Since Kotlin("1.4")
public fun
CharSequence.minOrNull(): Char? {
    if (isEmpty()) return null
    var min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if (min > e) min = e
    }
    return min
}

```

@Deprecated("Use minWithOrNull instead.", ReplaceWith("this.minWithOrNull(comparator)"))

```

* Since Kotlin("1.4")
public fun CharSequence.minWith(comparator: Comparator<in
Char>): Char? {
    return minWithOrNull(comparator)
}

```

Returns the first character having the smallest value according to the provided [comparator] or `null` if there are no characters.

```

* Since Kotlin("1.4")
public fun CharSequence.minWithOrNull(comparator: Comparator<in Char>): Char?
{
    if (isEmpty()) return null
    var min = this[0]
    for (i in 1..lastIndex) {
        val e = this[i]
        if
(comparator.compare(min, e) > 0) min = e
    }
    return min
}

```

Returns `true` if the char sequence has no characters.

@sample samples.collections.Collections.Aggregates.none

```

* public fun
CharSequence.none(): Boolean {
    return isEmpty()
}

```

Returns `true` if no characters match the given [predicate].

@sample samples.collections.Collections.Aggregates.noneWithPredicate

```

* public inline fun
CharSequence.none(predicate: (Char) -> Boolean): Boolean {
    for (element in this) if (predicate(element)) return
false
    return true
}

```

Performs the given [action] on each character and returns the char sequence itself

```

afterwards.\n *^@SinceKotlin("1.1")\npublic inline fun <S : CharSequence> S.onEach(action: (Char) -> Unit): S
{\n    return apply { for (element in this) action(element) }\n}\n\n/**\n * Performs the given [action] on each
character, providing sequential index with the character,\n * and returns the char sequence itself afterwards.\n *
@param [action] function that takes the index of a character and the character itself\n * and performs the action on
the character.\n *^@SinceKotlin("1.4")\npublic inline fun <S : CharSequence> S.onEachIndexed(action: (index:
Int, Char) -> Unit): S {\n    return apply { forEachIndexed(action) }\n}\n\n/**\n * Accumulates value starting with
the first character and applying [operation] from left to right\n * to current accumulator value and each character.\n *
\n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n *
please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function
that takes current accumulator value and a character,\n * and calculates the next accumulator value.\n * \n *
\n * @sample samples.collections.Collections.Aggregates.reduce\n *^@SinceKotlin("1.4")\npublic inline fun
CharSequence.reduce(operation: (acc: Char, Char) -> Char): Char {\n    if (isEmpty())\n        throw
UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = this[0]\n    for
(index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the first character and applying [operation] from left to
right\n * to current accumulator value and each character with its index in the original char sequence.\n * \n *
\n * Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way,\n *
please use [reduceIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation]
function that takes the index of a character, current accumulator value and the character itself,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n *^@SinceKotlin("1.4")\npublic inline fun
CharSequence.reduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): Char {\n    if (isEmpty())\n        throw
UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = this[0]\n    for
(index in 1..lastIndex) {\n        accumulator = operation(index, accumulator, this[index])\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the first character and applying [operation] from left to
right\n * to current accumulator value and each character with its index in the original char sequence.\n * \n *
\n * Returns `null` if the char sequence is empty.\n * \n * @param [operation] function that takes the index of a
character, current accumulator value and the character itself,\n * and calculates the next accumulator value.\n * \n *
\n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n *^@SinceKotlin("1.4")\npublic inline fun
CharSequence.reduceIndexedOrNull(operation: (index: Int, acc: Char, Char) -> Char): Char? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(index,
accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first
character and applying [operation] from left to right\n * to current accumulator value and each character.\n * \n *
\n * Returns `null` if the char sequence is empty.\n * \n * @param [operation] function that takes current accumulator
value and a character,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n *^@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic inline fun
CharSequence.reduceOrNull(operation: (acc: Char, Char) -> Char): Char? {\n    if (isEmpty())\n        return null\n    var accumulator = this[0]\n    for (index in 1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the last character and applying [operation]
from right to left\n * to each character and current accumulator value.\n * \n * \n * Throws an exception if this char
sequence is empty. If the char sequence can be empty in an expected way,\n * please use [reduceRightOrNull]
instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes a character and
current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n *^@SinceKotlin("1.4")\npublic inline fun
CharSequence.reduceRight(operation: (Char, acc: Char) -> Char): Char {\n    var index = lastIndex\n    if (index < 0)\n        throw UnsupportedOperationException("Empty char sequence can't be reduced.")\n    var accumulator = get(index--)\n    while (index >= 0) {\n        accumulator = operation(get(index--), accumulator)\n    }\n    return
accumulator\n}\n\n/**\n * Accumulates value starting with the last character and applying [operation] from right to

```

left to each character with its index in the original char sequence and current accumulator value. Throws an exception if this char sequence is empty. If the char sequence can be empty in an expected way, please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.

@param [operation] function that takes the index of a character, the character itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRight

```

public inline fun CharSequence.reduceRightIndexed(operation: (index: Int, Char, acc: Char) -> Char): Char {
    var index = lastIndex
    if (index < 0) throw UnsupportedOperationException("Empty char sequence can't be reduced.")
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with the last character and applying [operation] from right to left to each character with its index in the original char sequence and current accumulator value.

Returns `null` if the char sequence is empty.

@param [operation] function that takes the index of a character, the character itself and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRightOrNull

```

@SinceKotlin("1.4")
public inline fun CharSequence.reduceRightIndexedOrNull(operation: (index: Int, Char, acc: Char) -> Char): Char? {
    var index = lastIndex
    if (index < 0) return null
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with the last character and applying [operation] from right to left to each character and current accumulator value.

Returns `null` if the char sequence is empty.

@param [operation] function that takes a character and current accumulator value, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.reduceRightOrNull

```

@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public inline fun CharSequence.reduceRightOrNull(operation: (Char, acc: Char) -> Char): Char? {
    var index = lastIndex
    if (index < 0) return null
    var accumulator = get(index--)
    while (index >= 0) {
        accumulator = operation(get(index--), accumulator)
    }
    return accumulator
}

```

Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character and current accumulator value that starts with [initial] value.

Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.

@param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.runningFold

```

@SinceKotlin("1.4")
public inline fun <R> CharSequence.runningFold(initial: R, operation: (acc: R, Char) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(length + 1).apply { add(initial) }
    var accumulator = initial
    for (element in this) {
        accumulator = operation(accumulator, element)
        result.add(accumulator)
    }
    return result
}

```

Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character, its index in the original char sequence and current accumulator value that starts with [initial] value.

Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.

@param [operation] function that takes the index of a character, current accumulator value and the character itself, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.runningFold

```

@SinceKotlin("1.4")
public inline fun <R> CharSequence.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): List<R> {
    if (isEmpty()) return listOf(initial)
    val result = ArrayList<R>(length + 1).apply { add(initial) }
    var accumulator = initial
    for (index in indices) {
        accumulator = operation(index, accumulator, this[index])
        result.add(accumulator)
    }
    return result
}

```

Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character and current accumulator value that starts with the first character of this char sequence.

Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list.

@param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value.

@sample samples.collections.Collections.Aggregates.runningReduce

```

@SinceKotlin("1.4")
public inline fun

```

```

CharSequence.runningReduce(operation: (acc: Char, Char) -> Char): List<Char> {
    if (isEmpty()) return emptyList()
    var accumulator = this[0]
    val result = ArrayList<Char>(length).apply { add(accumulator) }
    for (index in 1 until length) {
        accumulator = operation(accumulator, this[index])
    }
    result.add(accumulator)
}

```

`runningReduce` Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character, its index in the original char sequence and current accumulator value that starts with the first character of this char sequence. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list. @param [operation] function that takes the index of a character, current accumulator value and the character itself, and calculates the next accumulator value. @sample

```

samples.collections.Collections.Aggregates.runningReduce

```

```

*\/n@SinceKotlin("1.4")npublic inline fun
CharSequence.runningReduceIndexed(operation: (index: Int, acc: Char, Char) -> Char): List<Char> {
    if (isEmpty()) return emptyList()
    var accumulator = this[0]
    val result = ArrayList<Char>(length).apply {
        add(accumulator)
    }
    for (index in 1 until length) {
        accumulator = operation(index, accumulator, this[index])
    }
    result.add(accumulator)
}

```

`runningReduceIndexed` Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list. @param [operation] function that takes current accumulator value and a character, and calculates the next accumulator value. @sample

```

samples.collections.Collections.Aggregates.scan

```

```

*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)npublic inline fun <R>
CharSequence.scan(initial: R, operation: (acc: R, Char) -> R): List<R> {
    return runningFold(initial, operation)
}

```

`scan` Returns a list containing successive accumulation values generated by applying [operation] from left to right to each character, its index in the original char sequence and current accumulator value that starts with [initial] value. Note that `acc` value passed to [operation] function should not be mutated; otherwise it would affect the previous value in resulting list. @param [operation] function that takes the index of a character, current accumulator value and the character itself, and calculates the next accumulator value. @sample

```

samples.collections.Collections.Aggregates.scan

```

```

*\/n@SinceKotlin("1.4")n@WasExperimental(ExperimentalStdlibApi::class)npublic inline fun <R>
CharSequence.scanIndexed(initial: R, operation: (index: Int, acc: R, Char) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}

```

`scanIndexed` Returns the sum of all values produced by [selector] function applied to each character in the char sequence. @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)")) @DeprecatedSinceKotlin(warningSince = "1.5")

```

npublic inline fun
CharSequence.sumBy(selector: (Char) -> Int): Int {
    var sum: Int = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

`sumBy` Returns the sum of all values produced by [selector] function applied to each character in the char sequence. @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)")) @DeprecatedSinceKotlin(warningSince = "1.5")

```

npublic inline fun
CharSequence.sumByDouble(selector: (Char) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

`sumByDouble` Returns the sum of all values produced by [selector] function applied to each character in the char sequence. @sample

```

*\/n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolution
ByLambdaReturnTypen@kotlin.jvm.JvmName("sumOfDouble")n@kotlin.internal.InlineOnlynpublic inline fun
CharSequence.sumOf(selector: (Char) -> Double): Double {
    var sum: Double = 0.toDouble()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

`sumOf` Returns the sum of all values produced by [selector] function applied to each character in the char sequence. @sample

```

*\/n@SinceKotlin("1.4")n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)n@OverloadResolution
ByLambdaReturnTypen@kotlin.jvm.JvmName("sumOfInt")n@kotlin.internal.InlineOnlynpublic inline fun
CharSequence.sumOf(selector: (Char) -> Int): Int {
    var sum: Int = 0.toInt()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

```

`sumOf` Returns the sum of all values produced by [selector]

function applied to each character in the char sequence.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfLong")\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.sumOf(selector: (Char) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each character in the char sequence.\n */
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfUInt")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.sumOf(selector: (Char) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each character in the char sequence.\n */
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolutionByLambdaReturnType\n@kotlin.jvm.JvmName("sumOfULong")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.sumOf(selector: (Char) -> ULong):
```

```
ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Splits this char sequence into a list of strings each not exceeding the given [size].\n * The last string in the resulting list may have fewer characters than the given [size].\n * @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence.\n * @sample samples.text.Strings.chunked
```

```
*\n@SinceKotlin("1.2")\npublic fun CharSequence.chunked(size: Int): List<String> {\n    return windowed(size, size, partialWindows = true)\n}\n\n/**\n * Splits this char sequence into several char sequences each not exceeding the given [size] and applies the given [transform] function to an each.\n * @return list of results of the [transform] applied to an each char sequence.\n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last char sequence may have fewer characters than the given [size].\n * @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence.\n * @sample samples.text.Strings.chunkedTransform
```

```
*\n@SinceKotlin("1.2")\npublic fun <R> CharSequence.chunked(size: Int, transform: (CharSequence) -> R): List<R> {\n    return windowed(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Splits this char sequence into a sequence of strings each not exceeding the given [size].\n * The last string in the resulting sequence may have fewer characters than the given [size].\n * @param size the number of elements to take in each string, must be positive and can be greater than the number of elements in this char sequence.\n * @sample
```

```
samples.collections.Collections.Transformations.chunked\n*\n@SinceKotlin("1.2")\npublic fun CharSequence.chunkedSequence(size: Int): Sequence<String> {\n    return chunkedSequence(size) { it.toString() }\n}\n\n/**\n * Splits this char sequence into several char sequences each not exceeding the given [size] and applies the given [transform] function to an each.\n * @return sequence of results of the [transform] applied to an each char sequence.\n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n * The last char sequence may have fewer characters than the given [size].\n * @param size the number of elements to take in each char sequence, must be positive and can be greater than the number of elements in this char sequence.\n * @sample samples.text.Strings.chunkedTransformToSequence
```

```
*\n@SinceKotlin("1.2")\npublic fun <R> CharSequence.chunkedSequence(size: Int, transform: (CharSequence) -> R): Sequence<R> {\n    return windowedSequence(size, size, partialWindows = true, transform = transform)\n}\n\n/**\n * Splits the original char sequence into pair of char sequences, where *first* char sequence contains characters for which [predicate] yielded `true`, while *second* char sequence contains characters for which [predicate] yielded `false`.\n * @sample samples.text.Strings.partition\n*\n@SinceKotlin("1.2")\npublic inline fun CharSequence.partition(predicate: (Char) -> Boolean): Pair<CharSequence, CharSequence> {\n    val first =
```

```

StringBuilder()\n    val second = StringBuilder()\n    for (element in this) {\n        if (predicate(element)) {\n            first.append(element)\n        } else {\n            second.append(element)\n        }\n    }\n    return Pair(first, second)\n}\n\n/**\n * Splits the original string into pair of strings,\n * where *first* string contains characters for which [predicate] yielded `true`,\n * while *second* string contains characters for which [predicate] yielded `false`.\n *\n * @sample samples.text.Strings.partition\n */\npublic inline fun String.partition(predicate: (Char) -> Boolean): Pair<String, String> {\n    val first = StringBuilder()\n    val second = StringBuilder()\n    for (element in this) {\n        if (predicate(element)) {\n            first.append(element)\n        } else {\n            second.append(element)\n        }\n    }\n    return Pair(first.toString(), second.toString())\n}\n\n/**\n * Returns a list of snapshots of the window of the given [size]\n * sliding along this char sequence with the given [step], where each\n * snapshot is a string.\n *\n * Several last strings may have fewer characters than the given [size].\n *\n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n *\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n *\n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin("1.2")\npublic fun CharSequence.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false): List<String> {\n    return windowed(size, step, partialWindows) { it.toString() }\n}\n\n/**\n * Returns a list of results of applying the given [transform] function to\n * an each char sequence representing a view over the window of the given [size]\n * sliding along this char sequence with the given [step].\n *\n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n *\n * Several last char sequences may have fewer characters than the given [size].\n *\n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n *\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n *\n * @sample samples.collections.Sequences.Transformations.averageWindows\n */\n@SinceKotlin("1.2")\npublic fun <R> CharSequence.windowed(size: Int, step: Int = 1, partialWindows: Boolean = false, transform: (CharSequence) -> R): List<R> {\n    checkWindowSizeStep(size, step)\n    val thisSize = this.length\n    val resultCapacity = thisSize / step + if (thisSize % step == 0) 0 else 1\n    val result = ArrayList<R>(resultCapacity)\n    var index = 0\n    while (index in 0 until thisSize) {\n        val end = index + size\n        val coercedEnd = if (end < 0 || end > thisSize) {\n            if (partialWindows) thisSize else break\n        } else end\n        result.add(transform(subSequence(index, coercedEnd)))\n        index += step\n    }\n    return result\n}\n\n/**\n * Returns a sequence of snapshots of the window of the given [size]\n * sliding along this char sequence with the given [step], where each\n * snapshot is a string.\n *\n * Several last strings may have fewer characters than the given [size].\n *\n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n *\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if any,\n * by default `false` which means partial windows won't be preserved\n *\n * @sample samples.collections.Sequences.Transformations.takeWindows\n */\n@SinceKotlin("1.2")\npublic fun CharSequence.windowedSequence(size: Int, step: Int = 1, partialWindows: Boolean = false): Sequence<String> {\n    return windowedSequence(size, step, partialWindows) { it.toString() }\n}\n\n/**\n * Returns a sequence of results of applying the given [transform] function to\n * an each char sequence representing a view over the window of the given [size]\n * sliding along this char sequence with the given [step].\n *\n * Note that the char sequence passed to the [transform] function is ephemeral and is valid only inside that function.\n * You should not store it or allow it to escape in some way, unless you made a snapshot of it.\n *\n * Several last char sequences may have fewer characters than the given [size].\n *\n * Both [size] and [step] must be positive and can be greater than the number of elements in this char sequence.\n *\n * @param size the number of elements to take in each window\n * @param step the number of elements to move the window forward by on an

```

```

each step, by default 1\n * @param partialWindows controls whether or not to keep partial windows in the end if
any,\n * by default `false` which means partial windows won't be preserved\n * \n * @sample
samples.collections.Sequences.Transformations.averageWindows\n *^\n@SinceKotlin("1.2")\npublic fun <R>
CharSequence.windowedSequence(size: Int, step: Int = 1, partialWindows: Boolean = false, transform:
(CharSequence) -> R): Sequence<R> {\n    checkWindowSizeStep(size, step)\n    val windows = (if
(partialWindows) indices else 0 until length - size + 1) step step\n    return windows.asSequence().map { index ->\n
        val end = index + size\n        val coercedEnd = if (end < 0 || end > length) length else end\n
transform(subSequence(index, coercedEnd))\n    }\n}\n\n/**\n * Returns a list of pairs built from the characters of
`this` and the [other] char sequences with the same index\n * The returned list has length of the shortest char
sequence.\n * \n * @sample samples.text.Strings.zip\n *^\npublic infix fun CharSequence.zip(other: CharSequence):
List<Pair<Char, Char>> {\n    return zip(other) { c1, c2 -> c1 to c2 }\n}\n\n/**\n * Returns a list of values built
from the characters of `this` and the [other] char sequences with the same index\n * using the provided [transform]
function applied to each pair of characters.\n * The returned list has length of the shortest char sequence.\n * \n *
@sample samples.text.Strings.zipWithTransform\n *^\npublic inline fun <V> CharSequence.zip(other:
CharSequence, transform: (a: Char, b: Char) -> V): List<V> {\n    val length = minOf(this.length, other.length)\n
val list = ArrayList<V>(length)\n    for (i in 0 until length) {\n        list.add(transform(this[i], other[i]))\n    }\n
return list\n}\n\n/**\n * Returns a list of pairs of each two adjacent characters in this char sequence.\n * \n * The
returned list is empty if this char sequence contains less than two characters.\n * \n * @sample
samples.collections.Collections.Transformations.zipWithNext\n *^\n@SinceKotlin("1.2")\npublic fun
CharSequence.zipWithNext(): List<Pair<Char, Char>> {\n    return zipWithNext { a, b -> a to b }\n}\n\n/**\n *
Returns a list containing the results of applying the given [transform] function\n * to an each pair of two adjacent
characters in this char sequence.\n * \n * The returned list is empty if this char sequence contains less than two
characters.\n * \n * @sample samples.collections.Collections.Transformations.zipWithNextToFindDeltas\n
*^\n@SinceKotlin("1.2")\npublic inline fun <R> CharSequence.zipWithNext(transform: (a: Char, b: Char) -> R):
List<R> {\n    val size = length - 1\n    if (size < 1) return emptyList()\n    val result = ArrayList<R>(size)\n
for (index in 0 until size) {\n        result.add(transform(this[index], this[index + 1]))\n    }\n    return result\n}\n\n/**\n *
Creates an [Iterable] instance that wraps the original char sequence returning its characters when being iterated.\n
*^\npublic fun CharSequence.asIterable(): Iterable<Char> {\n    if (this is String && isEmpty()) return emptyList()\n
return Iterable { this.iterator() }\n}\n\n/**\n * Creates a [Sequence] instance that wraps the original char sequence
returning its characters when being iterated.\n *^\npublic fun CharSequence.asSequence(): Sequence<Char> {\n    if
(this is String && isEmpty()) return emptySequence()\n    return Sequence { this.iterator() }\n}\n\n"/**\n *
Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*^\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
kotlin.text\nimport kotlin.contracts.contract\nimport kotlin.jvm.JvmName\n\n/**\n * Returns a copy of this string
converted to upper case using the rules of the default locale.\n *^\n@Deprecated("Use uppercase() instead.",
ReplaceWith("uppercase()"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
String.toUpperCase(): String\n\n/**\n * Returns a copy of this string converted to upper case using Unicode
mapping rules of the invariant locale.\n * \n * This function supports one-to-many and many-to-one character
mapping,\n * thus the length of the returned string can be different from the length of the original string.\n * \n *
@sample samples.text.Strings.uppercase\n
*^\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
String.uppercase(): String\n\n/**\n * Returns a copy of this string converted to lower case using the rules of the
default locale.\n *^\n@Deprecated("Use lowercase() instead.",
ReplaceWith("lowercase()"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
String.toLowerCase(): String\n\n/**\n * Returns a copy of this string converted to lower case using Unicode
mapping rules of the invariant locale.\n * \n * This function supports one-to-many and many-to-one character
mapping,\n * thus the length of the returned string can be different from the length of the original string.\n * \n *

```

```

@sample samples.text.Strings.lowercase\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun
String.lowercase(): String\n\n/**\n * Returns a copy of this string having its first letter titlecased using the rules of
the default locale,\n * or the original string if it's empty or already starts with a title case letter.\n *\n * The title case
of a character is usually the same as its upper case with several exceptions.\n * The particular list of characters with
the special title case form depends on the underlying platform.\n *\n * @sample samples.text.Strings.capitalize\n
*\n@Deprecated("Use replaceFirstChar instead.", ReplaceWith("replaceFirstChar { if (it.isLowerCase())
it.titlecase() else it.toString() }"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic expect fun
String.capitalize(): String\n\n/**\n * Returns a copy of this string having its first letter lowercased using the rules of
the default locale,\n * or the original string if it's empty or already starts with a lower case letter.\n *\n * @sample
samples.text.Strings.decapitalize\n
*\n@Deprecated("Use replaceFirstChar instead.",
ReplaceWith("replaceFirstChar { it.lowercase() }"))\n@DeprecatedSinceKotlin(warningSince = "1.5")\npublic
expect fun String.decapitalize(): String\n\n/**\n * Returns a sub sequence of this char sequence having leading and
trailing characters matching the [predicate] removed.\n *\n@public inline fun CharSequence.trim(predicate: (Char) ->
Boolean): CharSequence {\n    var startIndex = 0\n    var endIndex = length - 1\n    var startFound = false\n\n    while (startIndex <= endIndex) {\n        val index = if (!startFound) startIndex else endIndex\n        val match =
predicate(this[index])\n\n        if (!startFound) {\n            if (!match)\n                startFound = true\n            else\n                startIndex += 1\n        } else {\n            if (!match)\n                break\n            else\n                endIndex -= 1\n        }\n    }\n\n    return subSequence(startIndex, endIndex + 1)\n}\n\n/**\n * Returns a string having leading and
trailing characters matching the [predicate] removed.\n *\n@public inline fun String.trim(predicate: (Char) ->
Boolean): String =\n    (this as CharSequence).trim(predicate).toString()\n\n/**\n * Returns a sub sequence of this
char sequence having leading characters matching the [predicate] removed.\n *\n@public inline fun
CharSequence.trimStart(predicate: (Char) -> Boolean): CharSequence {\n    for (index in this.indices)\n        if
(!predicate(this[index]))\n            return subSequence(index, length)\n\n    return ""\n}\n\n/**\n * Returns a string
having leading characters matching the [predicate] removed.\n *\n@public inline fun String.trimStart(predicate:
(Char) -> Boolean): String =\n    (this as CharSequence).trimStart(predicate).toString()\n\n/**\n * Returns a sub
sequence of this char sequence having trailing characters matching the [predicate] removed.\n *\n@public inline fun
CharSequence.trimEnd(predicate: (Char) -> Boolean): CharSequence {\n    for (index in this.indices.reversed())\n        if
(!predicate(this[index]))\n            return subSequence(0, index + 1)\n\n    return ""\n}\n\n/**\n * Returns a string
having trailing characters matching the [predicate] removed.\n *\n@public inline fun String.trimEnd(predicate: (Char)
-> Boolean): String =\n    (this as CharSequence).trimEnd(predicate).toString()\n\n/**\n * Returns a sub sequence of
this char sequence having leading and trailing characters from the [chars] array removed.\n *\n@public fun
CharSequence.trim(vararg chars: Char): CharSequence = trim { it in chars }\n\n/**\n * Returns a string having
leading and trailing characters from the [chars] array removed.\n *\n@public fun String.trim(vararg chars: Char):
String = trim { it in chars }\n\n/**\n * Returns a sub sequence of this char sequence having leading characters from
the [chars] array removed.\n *\n@public fun CharSequence.trimStart(vararg chars: Char): CharSequence = trimStart {
it in chars }\n\n/**\n * Returns a string having leading characters from the [chars] array removed.\n *\n@public fun
String.trimStart(vararg chars: Char): String = trimStart { it in chars }\n\n/**\n * Returns a sub sequence of this char
sequence having trailing characters from the [chars] array removed.\n *\n@public fun CharSequence.trimEnd(vararg
chars: Char): CharSequence = trimEnd { it in chars }\n\n/**\n * Returns a string having trailing characters from the
[chars] array removed.\n *\n@public fun String.trimEnd(vararg chars: Char): String = trimEnd { it in chars }\n\n/**\n
* Returns a sub sequence of this char sequence having leading and trailing whitespace removed.\n *\n@public fun
CharSequence.trim(): CharSequence = trim(Char::isWhitespace)\n\n/**\n * Returns a string having leading and
trailing whitespace removed.\n *\n@kotlin.internal.InlineOnly\npublic inline fun String.trim(): String = (this as
CharSequence).trim().toString()\n\n/**\n * Returns a sub sequence of this char sequence having leading whitespace
removed.\n *\n@public fun CharSequence.trimStart(): CharSequence = trimStart(Char::isWhitespace)\n\n/**\n *
Returns a string having leading whitespace removed.\n *\n@kotlin.internal.InlineOnly\npublic inline fun
String.trimStart(): String = (this as CharSequence).trimStart().toString()\n\n/**\n * Returns a sub sequence of this

```

```

char sequence having trailing whitespace removed.\n */\npublic fun CharSequence.trimEnd(): CharSequence =
trimEnd(Char::isWhitespace)\n\n/**\n * Returns a string having trailing whitespace removed.\n */\n@kotlin.internal.InlineOnly\npublic inline fun String.trimEnd(): String = (this as
CharSequence).trimEnd().toString()\n\n/**\n * Returns a char sequence with content of this char sequence padded at
the beginning\n * to the specified [length] with the specified character or space.\n * @param length the desired
string length.\n * @param padChar the character to pad string with, if it has length less than the [length] specified.
Space is used by default.\n * @return Returns a char sequence of length at least [length] consisting of `this` char
sequence prepended with [padChar] as many times\n * as are necessary to reach that length.\n * @sample
samples.text.Strings.padStart\n */\npublic fun CharSequence.padStart(length: Int, padChar: Char = ' '):
CharSequence {\n    if (length < 0)\n        throw IllegalArgumentException("Desired length $length is less than
zero.")\n    if (length <= this.length)\n        return this.subSequence(0, this.length)\n\n    val sb =
StringBuilder(length)\n    for (i in 1..(length - this.length))\n        sb.append(padChar)\n    sb.append(this)\n    return
sb\n}\n\n/**\n * Pads the string to the specified [length] at the beginning with the specified character or space.\n *
@param length the desired string length.\n * @param padChar the character to pad string with, if it has length less
than the [length] specified. Space is used by default.\n * @return Returns a string of length at least [length]
consisting of `this` string prepended with [padChar] as many times\n * as are necessary to reach that length.\n *
@sample samples.text.Strings.padStart\n */\npublic fun String.padStart(length: Int, padChar: Char = ' '): String =\n(this as CharSequence).padStart(length, padChar).toString()\n\n/**\n * Returns a char sequence with content of this
char sequence padded at the end\n * to the specified [length] with the specified character or space.\n * @param
length the desired string length.\n * @param padChar the character to pad string with, if it has length less than the
[length] specified. Space is used by default.\n * @return Returns a char sequence of length at least [length]
consisting of `this` char sequence appended with [padChar] as many times\n * as are necessary to reach that
length.\n * @sample samples.text.Strings.padEnd\n */\npublic fun CharSequence.padEnd(length: Int, padChar: Char
= ' '): CharSequence {\n    if (length < 0)\n        throw IllegalArgumentException("Desired length $length is less
than zero.")\n    if (length <= this.length)\n        return this.subSequence(0, this.length)\n\n    val sb =
StringBuilder(length)\n    sb.append(this)\n    for (i in 1..(length - this.length))\n        sb.append(padChar)\n    return
sb\n}\n\n/**\n * Pads the string to the specified [length] at the end with the specified character or space.\n *
@param length the desired string length.\n * @param padChar the character to pad string with, if it has length less
than the [length] specified. Space is used by default.\n * @return Returns a string of length at least [length]
consisting of `this` string appended with [padChar] as many times\n * as are necessary to reach that length.\n *
@sample samples.text.Strings.padEnd\n */\npublic fun String.padEnd(length: Int, padChar: Char = ' '): String =\n(this as CharSequence).padEnd(length, padChar).toString()\n\n/**\n * Returns `true` if this nullable char sequence is
either `null` or empty.\n * @sample samples.text.Strings.stringOrNull\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence?.isNullOrEmpty(): Boolean {\n    contract {\n        returns(false) implies (this@isNullOrEmpty != null)\n    }\n\n    return this == null || this.length == 0\n}\n\n/**\n * Returns `true` if this char sequence is empty (contains no characters).\n * @sample
samples.text.Strings.stringIsEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.isEmpty():
Boolean = length == 0\n\n/**\n * Returns `true` if this char sequence is not empty.\n * @sample
samples.text.Strings.stringIsNotEmpty\n */\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.isNotEmpty(): Boolean = length > 0\n\n// implemented differently in JVM and JS\n//\npublic fun
String.isBlank(): Boolean = length() == 0 || all { it.isWhitespace() }\n\n/**\n * Returns `true` if this char sequence
is not empty and contains some characters except of whitespace characters.\n * @sample
samples.text.Strings.stringIsNotBlank\n */\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence.isNotBlank(): Boolean = !isBlank()\n\n/**\n * Returns `true` if this nullable char sequence is either
`null` or empty or consists solely of whitespace characters.\n * @sample
samples.text.Strings.stringOrNullOrBlank\n */\n@kotlin.internal.InlineOnly\npublic inline fun
CharSequence?.isNullOrBlank(): Boolean {\n    contract {\n        returns(false) implies (this@isNullOrBlank !=
null)\n    }\n\n    return this == null || this.isBlank()\n}\n\n/**\n * Iterator for characters of the given char sequence.\n

```

```

*\npublic operator fun CharSequence.iterator(): CharIterator = object : CharIterator() {\n    private var index = 0\n    public override fun nextChar(): Char = get(index++)\n    public override fun hasNext(): Boolean = index < length\n}\n\n/** Returns the string if it is not `null`, or the empty string otherwise.
*\n@kotlin.internal.InlineOnly\npublic inline fun String?.orEmpty(): String = this ?: ""\n\n/** Returns this char sequence if it's not empty\n * or the result of calling [defaultValue] function if the char sequence is empty.\n *\n * @sample samples.text.Strings.stringIfEmpty\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifEmpty(defaultValue: () -> R): R where C : CharSequence, C : R =\n    if (isEmpty()) defaultValue() else this\n\n/** Returns this char sequence if it is not empty and doesn't consist solely of whitespace characters,\n * or the result of calling [defaultValue] function otherwise.\n *\n * @sample samples.text.Strings.stringIfBlank\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun <C, R> C.ifBlank(defaultValue: () -> R): R where C : CharSequence, C : R =\n    if (isBlank()) defaultValue() else this\n\n/** Returns the range of valid character indices for this char sequence.\n *\npublic val CharSequence.indices: IntRange\n    get() = 0..length - 1\n\n/** Returns the index of the last character in the char sequence or -1 if it is empty.\n *\npublic val CharSequence.lastIndex: Int\n    get() = this.length - 1\n\n/** Returns `true` if this CharSequence has Unicode surrogate pair at the specified [index].\n *\npublic fun CharSequence.hasSurrogatePairAt(index: Int): Boolean {\n    return index in 0..length - 2\n        && this[index].isHighSurrogate()\n        && this[index + 1].isLowSurrogate()\n}\n\n/** Returns a substring specified by the given [range] of indices.\n *\npublic fun String.substring(range: IntRange): String = substring(range.start, range.endInclusive + 1)\n\n/** Returns a subsequence of this char sequence specified by the given [range] of indices.\n *\npublic fun CharSequence.subSequence(range: IntRange): CharSequence = subSequence(range.start, range.endInclusive + 1)\n\n/** Returns a subsequence of this char sequence.\n *\n * This extension is chosen only for invocation with old-named parameters.\n * Replace parameter names with the same as those of [CharSequence.subSequence].\n
*\n@kotlin.internal.InlineOnly\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER") // false
warning\n@Deprecated("Use parameters named startIndex and endIndex.", ReplaceWith("subSequence(startIndex = start, endIndex = end)"))\npublic inline fun String.subSequence(start: Int, end: Int): CharSequence = subSequence(start, end)\n\n/** Returns a substring of chars from a range of this char sequence starting at the [startIndex] and ending right before the [endIndex].\n *\n * @param startIndex the start index (inclusive).\n * @param endIndex the end index (exclusive). If not specified, the length of the char sequence is used.\n
*\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.substring(startIndex: Int, endIndex: Int = length): String = subSequence(startIndex, endIndex).toString()\n\n/** Returns a substring of chars at indices from the specified [range] of this char sequence.\n *\npublic fun CharSequence.substring(range: IntRange): String = subSequence(range.start, range.endInclusive + 1).toString()\n\n/** Returns a substring before the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n *\npublic fun String.substringBefore(delimiter: Char, missingDelimiterValue: String = this): String {\n    val index = indexOf(delimiter)\n    return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/** Returns a substring before the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n *\npublic fun String.substringBefore(delimiter: String, missingDelimiterValue: String = this): String {\n    val index = indexOf(delimiter)\n    return if (index == -1) missingDelimiterValue else substring(0, index)\n}\n\n/** Returns a substring after the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n *\npublic fun String.substringAfter(delimiter: Char, missingDelimiterValue: String = this): String {\n    val index = indexOf(delimiter)\n    return if (index == -1) missingDelimiterValue else substring(index + 1, length)\n}\n\n/** Returns a substring after the first occurrence of [delimiter].\n * If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n *\npublic fun String.substringAfter(delimiter: String, missingDelimiterValue: String = this): String {\n    val index = indexOf(delimiter)\n    return if (index == -1) missingDelimiterValue else substring(index + delimiter.length, length)\n}\n\n/** Returns a substring before the last occurrence of [delimiter].\n * If the string

```

does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.substringBeforeLast(delimiter: Char, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(0, index)
}

```

Returns a substring before the last occurrence of [delimiter].

If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.substringBeforeLast(delimiter: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(0, index)
}

```

Returns a substring before the last occurrence of [delimiter].

If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.substringAfterLast(delimiter: Char, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(index + 1, length)
}

```

Returns a substring after the last occurrence of [delimiter].

If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.substringAfterLast(delimiter: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else substring(index + delimiter.length, length)
}

```

Returns a substring after the last occurrence of [delimiter].

If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun CharSequence.replaceRange(startIndex: Int, endIndex: Int, replacement: CharSequence): CharSequence {
    if (endIndex < startIndex)
        throw IndexOutOfBoundsException("End index ($endIndex) is less than start index ($startIndex).")
    val sb = StringBuilder()
    sb.appendRange(this, 0, startIndex)
    sb.append(replacement)
    sb.appendRange(this, endIndex, length)
    return sb
}

```

Replaces the part of the string at the given range with the [replacement] char sequence.

@param startIndex the index of the first character to be replaced.

@param endIndex the index of the first character after the replacement to keep in the string.

```

public fun String.replaceRange(startIndex: Int, endIndex: Int, replacement: CharSequence): String =
    (this as CharSequence).replaceRange(startIndex, endIndex, replacement).toString()

```

Returns a char sequence with content of this char sequence where its part at the given [range] is replaced with the [replacement] char sequence.

\* The end index of the [range] is included in the part to be replaced.

```

public fun CharSequence.replaceRange(range: IntRange, replacement: CharSequence): CharSequence =
    replaceRange(range.start, range.endInclusive + 1, replacement)

```

Replace the part of string at the given [range] with the [replacement] string.

\* The end index of the [range] is included in the part to be replaced.

```

public inline fun String.replaceRange(range: IntRange, replacement: CharSequence): String =
    (this as CharSequence).replaceRange(range, replacement).toString()

```

Returns a char sequence with content of this char sequence where its part at the given range is removed.

\* @param startIndex the index of the first character to be removed.

\* @param endIndex the index of the first character after the removed part to keep in the string.

\* [endIndex] is not included in the removed part.

```

public fun CharSequence.removeRange(startIndex: Int, endIndex: Int): CharSequence {
    if (endIndex < startIndex)
        throw IndexOutOfBoundsException("End index ($endIndex) is less than start index ($startIndex).")
    if (endIndex == startIndex)
        return this.subSequence(0, length)
    val sb = StringBuilder(length - (endIndex - startIndex))
    sb.appendRange(this, 0, startIndex)
    sb.appendRange(this, endIndex, length)
    return sb
}

```

Removes the part of a string at a given range.

@param startIndex the index of the first character to be removed.

@param endIndex the index of the first character after the removed part to keep in the string.

\* [endIndex] is not included in the removed part.

```

public inline fun String.removeRange(startIndex: Int, endIndex: Int): String =
    (this as CharSequence).removeRange(startIndex, endIndex).toString()

```

Returns a char sequence with content of this char sequence where its part at the given [range] is removed.

\* The end index of the [range] is included in the removed part.

```

public fun CharSequence.removeRange(range: IntRange): CharSequence =
    removeRange(range.start, range.endInclusive + 1)

```

Removes the part of a string at the given [range].

\* The end index of the [range] is included in the removed part.

```

public inline fun

```

String.removeRange(range: IntRange): String = \n (this as CharSequence).removeRange(range).toString()\n\n/\*\*\n \* If this char sequence starts with the given [prefix], returns a new char sequence\n \* with the prefix removed.\n \* Otherwise, returns a new char sequence with the same characters.\n \*/\npublic fun

CharSequence.removePrefix(prefix: CharSequence): CharSequence {\n if (startsWith(prefix)) {\n return subSequence(prefix.length, length)\n }\n return subSequence(0, length)\n}\n\n/\*\*\n \* If this string starts with the given [prefix], returns a copy of this string\n \* with the prefix removed. Otherwise, returns this string.\n \*/\npublic fun String.removePrefix(prefix: CharSequence): String {\n if (startsWith(prefix)) {\n return substring(prefix.length)\n }\n return this\n}\n\n/\*\*\n \* If this char sequence ends with the given [suffix], returns a new char sequence\n \* with the suffix removed. Otherwise, returns a new char sequence with the same characters.\n \*/\npublic fun CharSequence.removeSuffix(suffix: CharSequence): CharSequence {\n if (endsWith(suffix)) {\n return subSequence(0, length - suffix.length)\n }\n return subSequence(0, length)\n}\n\n/\*\*\n \* If this string ends with the given [suffix], returns a copy of this string\n \* with the suffix removed. Otherwise, returns this string.\n \*/\npublic fun String.removeSuffix(suffix: CharSequence): String {\n if (endsWith(suffix)) {\n return substring(0, length - suffix.length)\n }\n return this\n}\n\n/\*\*\n \* When this char sequence starts with the given [prefix] and ends with the given [suffix],\n \* returns a new char sequence having both the given [prefix] and [suffix] removed.\n \* Otherwise returns a new char sequence with the same characters.\n \*/\npublic fun CharSequence.removeSurrounding(prefix: CharSequence, suffix: CharSequence): CharSequence {\n if ((length >= prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n return subSequence(prefix.length, length - suffix.length)\n }\n return subSequence(0, length)\n}\n\n/\*\*\n \* Removes from a string both the given [prefix] and [suffix] if and only if\n \* it starts with the [prefix] and ends with the [suffix].\n \* Otherwise returns this string unchanged.\n \*/\npublic fun String.removeSurrounding(prefix: CharSequence, suffix: CharSequence): String {\n if ((length >= prefix.length + suffix.length) && startsWith(prefix) && endsWith(suffix)) {\n return substring(prefix.length, length - suffix.length)\n }\n return this\n}\n\n/\*\*\n \* When this char sequence starts with and ends with the given [delimiter],\n \* returns a new char sequence having this [delimiter] removed both from the start and end.\n \* Otherwise returns a new char sequence with the same characters.\n \*/\npublic fun CharSequence.removeSurrounding(delimiter: CharSequence): CharSequence = removeSurrounding(delimiter, delimiter)\n\n/\*\*\n \* Removes the given [delimiter] string from both the start and the end of this string\n \* if and only if it starts with and ends with the [delimiter].\n \* Otherwise returns this string unchanged.\n \*/\npublic fun String.removeSurrounding(delimiter: CharSequence): String = removeSurrounding(delimiter, delimiter)\n\n/\*\*\n \* Replace part of string before the first occurrence of given delimiter with the [replacement] string.\n \* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n \*/\npublic fun String.replaceBefore(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/\*\*\n \* Replace part of string before the first occurrence of given delimiter with the [replacement] string.\n \* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n \*/\npublic fun String.replaceBefore(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)\n}\n\n/\*\*\n \* Replace part of string after the first occurrence of given delimiter with the [replacement] string.\n \* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n \*/\npublic fun String.replaceAfter(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)\n}\n\n/\*\*\n \* Replace part of string after the first occurrence of given delimiter with the [replacement] string.\n \* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.\n \*/\npublic fun String.replaceAfter(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {\n val index = indexOf(delimiter)\n return if (index == -1) missingDelimiterValue else replaceRange(index + delimiter.length, length, replacement)\n}\n\n/\*\*\n \* Replace part of string after the last occurrence of given delimiter with the [replacement] string.\n \* If the string does

not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.replaceAfterLast(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else replaceRange(index + delimiter.length, length, replacement)
}

```

\* Replace part of string after the last occurrence of given delimiter with the [replacement] string.

\* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.replaceAfterLast(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else replaceRange(index + 1, length, replacement)
}

```

\* Replace part of string before the last occurrence of given delimiter with the [replacement] string.

\* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.replaceBeforeLast(delimiter: Char, replacement: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)
}

```

\* Replace part of string before the last occurrence of given delimiter with the [replacement] string.

\* If the string does not contain the delimiter, returns [missingDelimiterValue] which defaults to the original string.

```

public fun String.replaceBeforeLast(delimiter: String, replacement: String, missingDelimiterValue: String = this): String {
    val index = lastIndexOf(delimiter)
    return if (index == -1) missingDelimiterValue else replaceRange(0, index, replacement)
}

```

// public fun String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean): String // JVM- and JS-specific

```

public fun String.replace(oldValue: String, newValue: String, ignoreCase: Boolean): String // JVM- and JS-specific

```

\* Returns a new string obtained by replacing each substring of this char sequence that matches the given regular expression with the given [replacement].

\* The [replacement] can consist of any combination of literal text and \$-substitutions. To treat the replacement string literally escape it with the [kotlin.text.Regex.Companion.escapeReplacement] method.

```

@kotlin.internal.InlineOnly
public inline fun CharSequence.replace(regex: Regex, replacement: String): String = regex.replace(this, replacement)

```

\* Returns a new string obtained by replacing each substring of this char sequence that matches the given regular expression with the result of the given function [transform] that takes [MatchResult] and returns a string to be used as a replacement for that match.

```

@kotlin.internal.InlineOnly
public inline fun CharSequence.replace(regex: Regex, noinline transform: (MatchResult) -> CharSequence): String = regex.replace(this, transform)

```

\* Replaces the first occurrence of the given regular expression [regex] in this char sequence with specified [replacement] expression.

\* @param replacement A replacement expression that can include substitutions. See [Regex.replaceFirst] for details.

```

@kotlin.internal.InlineOnly
public inline fun CharSequence.replaceFirst(regex: Regex, replacement: String): String = regex.replaceFirst(this, replacement)

```

\* Returns a copy of this string having its first character replaced with the result of the specified [transform], or the original string if it's empty.

\* @param transform function that takes the first character and returns the result of the transform applied to the character.

\* @sample samples.text.Strings.replaceFirstChar

```

@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@JvmName("replaceFirstCharWithChar")
@kotlin.internal.InlineOnly
public inline fun String.replaceFirstChar(transform: (Char) -> Char): String {
    return if (isNotEmpty()) transform(this[0]) + substring(1) else this
}

```

\* Returns a copy of this string having its first character replaced with the result of the specified [transform], or the original string if it's empty.

\* @param transform function that takes the first character and returns the result of the transform applied to the character.

\* @sample samples.text.Strings.replaceFirstChar

```

@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@JvmName("replaceFirstCharWithCharSequence")
@kotlin.internal.InlineOnly
public inline fun String.replaceFirstChar(transform: (Char) -> CharSequence): String {
    return if (isNotEmpty()) transform(this[0]).toString() + substring(1) else this
}

```

\* Returns `true` if this char sequence matches the given regular expression.

```

@kotlin.internal.InlineOnly
public inline infix fun CharSequence.matches(regex: Regex): Boolean =

```

```

regex.matches(this)\n\n/**\n * Implementation of [regionMatches] for CharSequences.\n * Invoked when it's
already known that arguments are not Strings, so that no additional type checks are performed.\n */\ninternal fun
CharSequence.regionMatchesImpl(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int, ignoreCase:
Boolean): Boolean {\n    if ((otherOffset < 0) || (thisOffset < 0) || (thisOffset > this.length - length) || (otherOffset >
other.length - length)) {\n        return false\n    }\n    for (index in 0 until length) {\n        if (!this[thisOffset +
index].equals(other[otherOffset + index], ignoreCase))\n            return false\n    }\n    return true\n}\n\n/**\n *
Returns `true` if this char sequence starts with the specified character.\n */\npublic fun
CharSequence.startsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n    this.length > 0 &&
this[0].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence ends with the specified character.\n
*/\npublic fun CharSequence.endsWith(char: Char, ignoreCase: Boolean = false): Boolean =\n    this.length > 0 &&
this[lastIndex].equals(char, ignoreCase)\n\n/**\n * Returns `true` if this char sequence starts with the specified
prefix.\n */\npublic fun CharSequence.startsWith(prefix: CharSequence, ignoreCase: Boolean = false): Boolean {\n
if (!ignoreCase && this is String && prefix is String)\n    return this.startsWith(prefix)\n    else\n    return
regionMatchesImpl(0, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if a substring of this char
sequence starting at the specified offset [startIndex] starts with the specified prefix.\n */\npublic fun
CharSequence.startsWith(prefix: CharSequence, startIndex: Int, ignoreCase: Boolean = false): Boolean {\n    if
(!ignoreCase && this is String && prefix is String)\n        return this.startsWith(prefix, startIndex)\n    else\n
return regionMatchesImpl(startIndex, prefix, 0, prefix.length, ignoreCase)\n}\n\n/**\n * Returns `true` if this char
sequence ends with the specified suffix.\n */\npublic fun CharSequence.endsWith(suffix: CharSequence,
ignoreCase: Boolean = false): Boolean {\n    if (!ignoreCase && this is String && suffix is String)\n        return
this.endsWith(suffix)\n    else\n        return regionMatchesImpl(length - suffix.length, suffix, 0, suffix.length,
ignoreCase)\n}\n}\n\n// common prefix and suffix\n\n/**\n * Returns the longest string `prefix` such that this char
sequence and [other] char sequence both start with this prefix,\n * taking care not to split surrogate pairs.\n * If this
and [other] have no common prefix, returns the empty string.\n * @param ignoreCase `true` to ignore character
case when matching a character. By default `false`.\n * @sample samples.text.Strings.commonPrefixWith\n
*/\npublic fun CharSequence.commonPrefixWith(other: CharSequence, ignoreCase: Boolean = false): String {\n
val shortestLength = minOf(this.length, other.length)\n    var i = 0\n    while (i < shortestLength &&
this[i].equals(other[i], ignoreCase = ignoreCase)) {\n        i++\n    }\n    if (this.hasSurrogatePairAt(i - 1) ||
other.hasSurrogatePairAt(i - 1)) {\n        i--\n    }\n    return subSequence(0, i).toString()\n}\n\n/**\n * Returns the
longest string `suffix` such that this char sequence and [other] char sequence both end with this suffix,\n * taking
care not to split surrogate pairs.\n * If this and [other] have no common suffix, returns the empty string.\n\n *
@param ignoreCase `true` to ignore character case when matching a character. By default `false`.\n * @sample
samples.text.Strings.commonSuffixWith\n
*/\npublic fun CharSequence.commonSuffixWith(other: CharSequence,
ignoreCase: Boolean = false): String {\n    val thisLength = this.length\n    val otherLength = other.length\n    val
shortestLength = minOf(thisLength, otherLength)\n    var i = 0\n    while (i < shortestLength && this[thisLength -
i - 1].equals(other[otherLength - i - 1], ignoreCase = ignoreCase)) {\n        i++\n    }\n    if
(this.hasSurrogatePairAt(thisLength - i - 1) || other.hasSurrogatePairAt(otherLength - i - 1)) {\n        i--\n    }\n
return subSequence(thisLength - i, thisLength).toString()\n}\n\n// indexOfAny()\n\n/**\n * Finds the index of the
first occurrence of any of the specified [chars] in this char sequence,\n * starting from the specified [startIndex] and
optionally ignoring the case.\n * @param ignoreCase `true` to ignore character case when matching a character.
By default `false`.\n * @return An index of the first occurrence of matched character from [chars] or -1 if none of
[chars] are found.\n * @public fun CharSequence.indexOfAny(chars: CharArray, startIndex: Int = 0, ignoreCase:
Boolean = false): Int {\n    if (!ignoreCase && chars.size == 1 && this is String) {\n        val char = chars.single()\n
return nativeIndexOf(char, startIndex)\n    }\n    for (index in startIndex.coerceAtLeast(0)..lastIndex) {\n        val
charAtIndex = get(index)\n        if (chars.any { it.equals(charAtIndex, ignoreCase) })\n            return index\n    }\n
return -1\n}\n\n/**\n * Finds the index of the last occurrence of any of the specified [chars] in this char sequence,\n
* starting from the specified [startIndex] and optionally ignoring the case.\n * @param startIndex The index of
character to start searching at. The search proceeds backward toward the beginning of the string.\n * @param

```

```

ignoreCase `true` to ignore character case when matching a character. By default `false`.

```

`@return` An index of the last occurrence of matched character from [chars] or -1 if none of [chars] are found.

```

public fun CharSequence.lastIndexOfAny(chars: CharArray, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {
    if (!ignoreCase && chars.size == 1 && this is String) {
        val char = chars.single()
        return nativeLastIndexOf(char, startIndex)
    }
    for (index in startIndex.coerceAtMost(lastIndex) downTo 0) {
        val charAtIndex = get(index)
        if (chars.any { it.equals(charAtIndex, ignoreCase) })
            return index
    }
    return -1
}
private fun CharSequence.indexOf(other: CharSequence, startIndex: Int, endIndex: Int, ignoreCase: Boolean, last: Boolean = false): Int {
    val indices = if (!last)
        startIndex.coerceAtLeast(0)..endIndex.coerceAtMost(length)
    else
        startIndex.coerceAtMost(lastIndex)
        downTo endIndex.coerceAtLeast(0)
    if (this is String && other is String) { // smart cast
        for (index in indices) {
            if (other.regionMatches(0, this, index, other.length, ignoreCase))
                return index
        }
    } else {
        for (index in indices) {
            if (other.regionMatchesImpl(0, this, index, other.length, ignoreCase))
                return index
        }
    }
    return -1
}
private fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int, ignoreCase: Boolean, last: Boolean): Pair<Int, String>? {
    if (!ignoreCase && strings.size == 1) {
        val string = strings.single()
        val index = if (!last) indexOf(string, startIndex) else lastIndexOf(string, startIndex)
        return if (index < 0) null else index to string
    }
    val indices = if (!last)
        startIndex.coerceAtLeast(0)..length else startIndex.coerceAtMost(lastIndex)
        downTo 0
    if (this is String) {
        for (index in indices) {
            val matchingString = strings.firstOrNull { it.regionMatches(0, this, index, it.length, ignoreCase) }
            if (matchingString != null)
                return index to matchingString
        }
    } else {
        for (index in indices) {
            val matchingString = strings.firstOrNull { it.regionMatchesImpl(0, this, index, it.length, ignoreCase) }
            if (matchingString != null)
                return index to matchingString
        }
    }
    return null
}

```

`* Finds the first occurrence of any of the specified [strings] in this char sequence, starting from the specified [startIndex] and optionally ignoring the case.`

`@param ignoreCase `true`` to ignore character case when matching a string. By default `false`.

`@return` A pair of an index of the first occurrence of matched string from [strings] and the string matched or `null` if none of [strings] are found.

To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from the beginning to the end of this string, and finds at each position the first element in [strings] that matches this string at that position.

```

public fun CharSequence.findAnyOf(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Pair<Int, String>? =
    findAnyOf(strings, startIndex, ignoreCase, last = false)

```

`* Finds the last occurrence of any of the specified [strings] in this char sequence, starting from the specified [startIndex] and optionally ignoring the case.`

`@param startIndex` The index of character to start searching at. The search proceeds backward toward the beginning of the string.

`@param ignoreCase `true`` to ignore character case when matching a string. By default `false`.

`@return` A pair of an index of the last occurrence of matched string from [strings] and the string matched or `null` if none of [strings] are found.

To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from the end toward the beginning of this string, and finds at each position the first element in [strings] that matches this string at that position.

```

public fun CharSequence.findLastAnyOf(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Pair<Int, String>? =
    findAnyOf(strings, startIndex, ignoreCase, last = true)

```

`* Finds the index of the first occurrence of any of the specified [strings] in this char sequence, starting from the specified [startIndex] and optionally ignoring the case.`

`@param ignoreCase `true`` to ignore character case when matching a string. By default `false`.

`@return` An index of the first occurrence of matched string from [strings] or -1 if none of [strings] are found.

To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from the beginning to the end of this string, and finds at each position the first element in [strings] that matches this string at that position.

```

public fun CharSequence.indexOfAny(strings: Collection<String>, startIndex: Int = 0, ignoreCase: Boolean = false): Int =
    findAnyOf(strings, startIndex, ignoreCase, last = false)?.first ?: -1

```

`* Finds the index of the last occurrence of any of the specified [strings] in this char sequence, starting from the specified [startIndex] and optionally ignoring the case.`

`@param startIndex` The index of character to start searching at. The search proceeds

backward toward the beginning of the string.  
`* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.`  
`* @return An index of the last occurrence of matched string from [strings] or -1 if none of [strings] are found.`  
`* To avoid ambiguous results when strings in [strings] have characters in common, this method proceeds from the end toward the beginning of this string, and finds at each position the first element in [strings] that matches this string at that position.`  
`* ^\npublic fun`

`CharSequence.lastIndexOfAny(strings: Collection<String>, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int = findAnyOf(strings, startIndex, ignoreCase, last = true)?.first ?: -1`  
`// indexOf`  
`* Returns the index within this string of the first occurrence of the specified character, starting from the specified [startIndex].`  
`* @param ignoreCase `true` to ignore character case when matching a character. By default `false`.`  
`* @return An index of the first occurrence of [char] or -1 if none is found.`  
`* ^\npublic fun`

`CharSequence.indexOf(char: Char, startIndex: Int = 0, ignoreCase: Boolean = false): Int {`  
`return if (ignoreCase || this !is String)`  
`indexOfAny(charArrayOf(char), startIndex, ignoreCase)`  
`else`  
`nativeIndexOf(char, startIndex)`  
`}`  
`* Returns the index within this char sequence of the first occurrence of the specified [string], starting from the specified [startIndex].`  
`* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.`  
`* @return An index of the first occurrence of [string] or -1 if none is found.`  
`* @sample samples.text.Strings.indexOf`  
`* ^\npublic fun`

`CharSequence.indexOf(string: String, startIndex: Int = 0, ignoreCase: Boolean = false): Int {`  
`return if (ignoreCase || this !is String)`  
`indexOf(string, startIndex, length, ignoreCase)`  
`else`  
`nativeIndexOf(string, startIndex)`  
`}`  
`* Returns the index within this char sequence of the last occurrence of the specified character, starting from the specified [startIndex].`  
`* @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.`  
`* @param ignoreCase `true` to ignore character case when matching a character. By default `false`.`  
`* @return An index of the last occurrence of [char] or -1 if none is found.`  
`* ^\npublic fun`

`CharSequence.lastIndexOf(char: Char, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {`  
`return if (ignoreCase || this !is String)`  
`lastIndexOfAny(charArrayOf(char), startIndex, ignoreCase)`  
`else`  
`nativeLastIndexOf(char, startIndex)`  
`}`  
`* Returns the index within this char sequence of the last occurrence of the specified [string], starting from the specified [startIndex].`  
`* @param startIndex The index of character to start searching at. The search proceeds backward toward the beginning of the string.`  
`* @param ignoreCase `true` to ignore character case when matching a string. By default `false`.`  
`* @return An index of the last occurrence of [string] or -1 if none is found.`  
`* ^\npublic fun`

`CharSequence.lastIndexOf(string: String, startIndex: Int = lastIndex, ignoreCase: Boolean = false): Int {`  
`return if (ignoreCase || this !is String)`  
`indexOf(string, startIndex, 0, ignoreCase, last = true)`  
`else`  
`nativeLastIndexOf(string, startIndex)`  
`}`  
`* Returns `true` if this char sequence contains the specified [other] sequence of characters as a substring.`  
`* @param ignoreCase `true` to ignore character case when comparing strings. By default `false`.`  
`* ^\n@Suppress("INAPPLICABLE_OPERATOR_MODIFIER")\npublic operator fun`

`CharSequence.contains(other: CharSequence, ignoreCase: Boolean = false): Boolean =`  
`if (other is String)`  
`indexOf(other, ignoreCase = ignoreCase) >= 0`  
`else`  
`indexOf(other, 0, length, ignoreCase) >= 0`  
`* Returns `true` if this char sequence contains the specified character [char].`  
`* @param ignoreCase `true` to ignore character case when comparing characters. By default `false`.`  
`* ^\n@Suppress("INAPPLICABLE_OPERATOR_MODIFIER")\npublic operator fun`

`CharSequence.contains(char: Char, ignoreCase: Boolean = false): Boolean =`  
`indexOf(char, ignoreCase = ignoreCase) >= 0`  
`* Returns `true` if this char sequence contains at least one match of the specified regular expression [regex].`  
`* ^\n@kotlin.internal.InlineOnly\npublic inline operator fun`

`CharSequence.contains(regex: Regex): Boolean =`  
`regex.containsMatchIn(this)`  
`// rangesDelimitedBy`  
`private class DelimitedRangesSequence {`  
`private val input: CharSequence,`  
`private val startIndex: Int,`  
`private val limit: Int,`  
`private val getNextMatch: CharSequence.(currentIndex: Int) -> Pair<Int, Int>? }`  
`: Sequence<IntRange> {`  
`override fun iterator():`

`Iterator<IntRange> = object : Iterator<IntRange> {`  
`var nextState: Int = -1 // -1 for unknown, 0 for done, 1 for continue`  
`var currentStartIndex: Int = startIndex.coerceIn(0, input.length)`  
`var nextSearchIndex: Int = currentStartIndex`  
`var nextItem: IntRange? = null`  
`var counter: Int = 0`  
`private fun calcNext() {`

```

        if (nextSearchIndex < 0) {
            nextState = 0
            nextItem = null
        } else {
            if (limit > 0 && ++counter >= limit || nextSearchIndex > input.length) {
                nextItem =
                currentStartIndex..input.lastIndex
                nextSearchIndex = -1
            } else {
                val match =
                input.getNextMatch(nextSearchIndex)
                if (match == null) {
                    nextItem =
                    currentStartIndex..input.lastIndex
                    nextSearchIndex = -1
                } else {
                    val
                    (index, length) = match
                    nextItem = currentStartIndex until index
                    currentStartIndex
                    = index + length
                    nextSearchIndex = currentStartIndex + if (length == 0) 1 else 0
                }
            }
            nextState = 1
        }
    }
}

override fun next(): IntRange {
    if (nextState ==
    -1) {
        calcNext()
        if (nextState == 0) {
            throw NoSuchElementException()
        }
        val
        result = nextItem as IntRange
        // Clean next to avoid keeping reference on yielded instance
        nextItem = null
        nextState = -1
        return result
    }
}

override fun hasNext(): Boolean {
    if (nextState == -1) {
        calcNext()
        return nextState == 1
    }
}
}

/** Returns a
sequence of index ranges of substrings in this char sequence around occurrences of the specified [delimiters].
@param delimiters One or more characters to be used as delimiters.
@param startIndex The index to start
searching delimiters from.
No range having its start value less than [startIndex] is returned.
[startIndex] is
coerced to be non-negative and not greater than length of this string.
@param ignoreCase `true` to ignore
character case when matching a delimiter. By default `false`.
@param limit The maximum number of substrings
to return. Zero by default means no limit is set.
private fun CharSequence.rangesDelimitedBy(delimiters:
CharArray, startIndex: Int = 0, ignoreCase: Boolean = false, limit: Int = 0): Sequence<IntRange> {
    requireNonNegativeLimit(limit)
    return DelimitedRangesSequence(this, startIndex, limit, { currentIndex ->
        indexOfAny(delimiters, currentIndex, ignoreCase = ignoreCase).let { if (it < 0) null else it to 1 }
    })
}

/** Returns a sequence of index ranges of substrings in this char sequence around occurrences of the
specified [delimiters].
@param delimiters One or more strings to be used as delimiters.
@param
startIndex The index to start searching delimiters from.
No range having its start value less than [startIndex] is
returned.
[startIndex] is coerced to be non-negative and not greater than length of this string.
@param
ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.
@param limit The
maximum number of substrings to return. Zero by default means no limit is set.
To avoid ambiguous results
when strings in [delimiters] have characters in common, this method proceeds from
the beginning to the end of
this string, and finds at each position the first element in [delimiters]
that matches this string at that position.
private fun CharSequence.rangesDelimitedBy(delimiters: Array<out String>, startIndex: Int = 0, ignoreCase:
Boolean = false, limit: Int = 0): Sequence<IntRange> {
    requireNonNegativeLimit(limit)
    val delimitersList =
    delimiters.asList()
    return DelimitedRangesSequence(this, startIndex, limit, { currentIndex ->
        findAnyOf(delimitersList, currentIndex, ignoreCase = ignoreCase, last = false)?.let { it.first to it.second.length }
    })
}

internal fun requireNonNegativeLimit(limit: Int) =
    require(limit >= 0) { "Limit must be non-
negative, but was $limit" }

/** Splits this char sequence to a sequence of strings around
occurrences of the specified [delimiters].
@param delimiters One or more strings to be used as delimiters.
@param ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.
@param
limit The maximum number of substrings to return. Zero by default means no limit is set.
To avoid
ambiguous results when strings in [delimiters] have characters in common, this method proceeds from
the beginning to the end of this string, and finds at each position the first element in [delimiters]
that matches this
string at that position.
public fun CharSequence.splitToSequence(vararg delimiters: String, ignoreCase:
Boolean = false, limit: Int = 0): Sequence<String> =
    rangesDelimitedBy(delimiters, ignoreCase = ignoreCase,
    limit = limit).map { substring(it) }

/** Splits this char sequence to a list of strings around occurrences of the
specified [delimiters].
@param delimiters One or more strings to be used as delimiters.
@param
ignoreCase `true` to ignore character case when matching a delimiter. By default `false`.
@param limit The
maximum number of substrings to return. Zero by default means no limit is set.
To avoid ambiguous results
when strings in [delimiters] have characters in common, this method proceeds from
the beginning to the end of
this string, and matches at each position the first element in [delimiters]
that is equal to a delimiter in this

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instance at that position.\n */\npublic fun CharSequence.split(vararg delimiters: String, ignoreCase: Boolean = false,
limit: Int = 0): List<String> {\n    if (delimiters.size == 1) {\n        val delimiter = delimiters[0]\n        if
(!delimiter.isEmpty()) {\n            return split(delimiter, ignoreCase, limit)\n        }\n    }\n    return
rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).asIterable().map { substring(it) }\n}\n\n/**\n * Splits this char sequence to a sequence of strings around occurrences of the specified [delimiters].\n * @param
delimiters One or more characters to be used as delimiters.\n * @param ignoreCase `true` to ignore character case
when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings to return.\n
*/\npublic fun CharSequence.splitToSequence(vararg delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0):
Sequence<String> =\n    rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).map { substring(it)
}\n}\n\n/**\n * Splits this char sequence to a list of strings around occurrences of the specified [delimiters].\n * @param
delimiters One or more characters to be used as delimiters.\n * @param ignoreCase `true` to ignore
character case when matching a delimiter. By default `false`.\n * @param limit The maximum number of substrings
to return.\n */\npublic fun CharSequence.split(vararg delimiters: Char, ignoreCase: Boolean = false, limit: Int = 0):
List<String> {\n    if (delimiters.size == 1) {\n        return split(delimiters[0].toString(), ignoreCase, limit)\n    }\n    return
rangesDelimitedBy(delimiters, ignoreCase = ignoreCase, limit = limit).asIterable().map { substring(it)
}\n}\n\n/**\n * Splits this char sequence to a list of strings around occurrences of the specified [delimiter].\n * This
is specialized version of split which receives single non-empty delimiter and offers better performance\n * @param
delimiter String used as delimiter\n * @param ignoreCase `true` to ignore character case when matching a
delimiter. By default `false`.\n * @param limit The maximum number of substrings to return.\n */\nprivate fun
CharSequence.split(delimiter: String, ignoreCase: Boolean, limit: Int): List<String> {\n
requireNonNegativeLimit(limit)\n    var currentOffset = 0\n    var nextIndex = indexOf(delimiter, currentOffset,
ignoreCase)\n    if (nextIndex == -1 || limit == 1) {\n        return listOf(this.toString())\n    }\n    val isLimited =
limit > 0\n    val result = ArrayList<String>(if (isLimited) limit.coerceAtMost(10) else 10)\n    do {\n        result.add(substring(currentOffset, nextIndex))\n        currentOffset = nextIndex + delimiter.length\n        // Do not
search for next occurrence if we're reaching limit\n        if (isLimited && result.size == limit - 1) break\n        nextIndex = indexOf(delimiter, currentOffset, ignoreCase)\n    } while (nextIndex != -1)\n    result.add(substring(currentOffset, length))\n    return result\n}\n\n/**\n * Splits this char sequence to a list of
strings around matches of the given regular expression.\n * @param limit Non-negative value specifying the
maximum number of substrings to return.\n * Zero by default means no limit is set.\n
*/\n@kotlin.internal.InlineOnly\npublic inline fun CharSequence.split(regex: Regex, limit: Int = 0): List<String> =
regex.split(this, limit)\n\n/**\n * Splits this char sequence to a sequence of strings around matches of the given
regular expression.\n * @param limit Non-negative value specifying the maximum number of substrings to
return.\n * Zero by default means no limit is set.\n * @sample samples.text.Strings.splitToSequence\n
*/\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic
inline fun CharSequence.splitToSequence(regex: Regex, limit: Int = 0): Sequence<String> =
regex.splitToSequence(this, limit)\n\n/**\n * Splits this char sequence to a sequence of lines delimited by any of the
following character sequences: CRLF, LF or CR.\n * @param limit Non-negative value specifying the maximum number of
lines to return.\n * The lines returned do not include terminating line
separators.\n */\npublic fun CharSequence.lineSequence(): Sequence<String> = splitToSequence("\\r\\n", "\\n",
"\\r")\n\n/**\n * Splits this char sequence to a list of lines delimited by any of the following character sequences:
CRLF, LF or CR.\n * @param limit Non-negative value specifying the maximum number of lines to return.\n * The lines
returned do not include terminating line separators.\n */\npublic fun
CharSequence.lines(): List<String> = lineSequence().toList()\n\n/**\n * Returns `true` if the contents of this char
sequence are equal to the contents of the specified [other],\n * i.e. both char sequences contain the same number of
the same characters in the same order.\n * @param other CharSequence\n * @sample samples.text.Strings.contentEquals\n
*/\n@SinceKotlin("1.5")\npublic expect infix fun CharSequence?.contentEquals(other: CharSequence?):
Boolean\n\n/**\n * Returns `true` if the contents of this char sequence are equal to the contents of the specified
[other], optionally ignoring case difference.\n * @param ignoreCase `true` to ignore character case when
comparing contents.\n * @sample samples.text.Strings.contentEquals\n */\n@SinceKotlin("1.5")\npublic
expect fun CharSequence?.contentEquals(other: CharSequence?, ignoreCase: Boolean): Boolean\n\ninternal fun

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CharSequence?.contentEqualsIgnoreCaseImpl(other: CharSequence?): Boolean {
    if (this is String && other is String) {
        return this.equals(other, ignoreCase = true)
    }
    if (this === other) return true
    if (this == null || other == null || this.length != other.length) return false
    for (i in 0 until length) {
        if (!this[i].equals(other[i], ignoreCase = true)) {
            return false
        }
    }
    return true
}

internal fun CharSequence?.contentEqualsImpl(other: CharSequence?): Boolean {
    if (this is String && other is String) {
        return this == other
    }
    if (this === other) return true
    if (this == null || other == null || this.length != other.length) return false
    for (i in 0 until length) {
        if (this[i] != other[i]) {
            return false
        }
    }
    return true
}

/** Returns `true` if the content of this string is equal to the word `true`, `false` if it is equal to `false`, and throws an exception otherwise.
 * There is also a lenient version of the function available on nullable String, [String?.toBoolean].
 * Note that this function is case-sensitive.
 * @sample samples.text.Strings.toBooleanStrict
 */
@SinceKotlin("1.5")
public fun String.toBooleanStrict(): Boolean = when (this) {
    "true" -> true
    "false" -> false
    else -> throw IllegalArgumentException("The string doesn't represent a boolean value: $this")
}

/** Returns `true` if the content of this string is equal to the word `true`, `false` if it is equal to `false`, and `null` otherwise.
 * There is also a lenient version of the function available on nullable String, [String?.toBoolean].
 * Note that this function is case-sensitive.
 * @sample samples.text.Strings.toBooleanStrictOrNull
 */
@SinceKotlin("1.5")
public fun String.toBooleanStrictOrNull(): Boolean? = when (this) {
    "true" -> true
    "false" -> false
    else -> null
}

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 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
// Auto-generated file. DO NOT EDIT!
package kotlin
import kotlin.jvm.*

@SinceKotlin("1.3")
@ExperimentalUnsignedTypes
@JvmInline
public value class UByteArray @PublishedApi internal constructor(@PublishedApi internal val storage: ByteArray) : Collection<UByte> {
    /** Creates a new array of the specified [size], with all elements initialized to zero.
     * public constructor(size: Int) : this(ByteArray(size))
     * Returns the array element at the given [index]. This method can be called using the index operator.
     * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified.
     * public operator fun get(index: Int): UByte = storage[index].toUByte()
     * Sets the element at the given [index] to the given [value]. This method can be called using the index operator.
     * If the [index] is out of bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified.
     * public operator fun set(index: Int, value: UByte) { storage[index] = value.toByte() }
     * Returns the number of elements in the array.
     * public override val size: Int get() = storage.size
     * Creates an iterator over the elements of the array.
     * public override operator fun iterator(): kotlin.collections.Iterator<UByte> = Iterator(storage)
     * @Suppress("DEPRECATION_ERROR")
     * private class Iterator(private val array: ByteArray) : UByteIterator() {
     *     private var index = 0
     *     override fun hasNext() = index < array.size
     *     override fun nextUByte() = if (index < array.size) array[index++].toUByte() else throw NoSuchElementException(index.toString())
     *     override fun contains(element: UByte): Boolean {
     *         // TODO: Eliminate this check after KT-30016 gets fixed.
     *         // Currently JS BE does not generate special bridge method for this method.
     *         @Suppress("USELESS_CAST")
     *         if ((element as Any?) !is UByte) return false
     *         return storage.contains(element.toByte())
     *     }
     *     override fun containsAll(elements: Collection<UByte>): Boolean {
     *         return (elements as Collection<*>).all { it is UByte && storage.contains(it.toByte()) }
     *     }
     *     override fun isEmpty(): Boolean = this.storage.size == 0
     * }
     * Creates a new array of the specified [size], where each element is calculated by calling the specified [init] function.
     * The function [init] is called for each array element sequentially starting from the first one.
     * It should return the value for an array element given its index.
     * @SinceKotlin("1.3")
     * @ExperimentalUnsignedTypes
     * @kotlin.internal.InlineOnly
     * public inline fun UByteArray(size: Int, init: (Int) -> UByte): UByteArray {
     *     return UByteArray(ByteArray(size) { index -> init(index).toByte() })
     * }
     * @SinceKotlin("1.3")
     * @ExperimentalUnsignedTypes
     * @kotlin.internal.InlineOnly
     * public inline fun

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ubyteArrayOf(vararg elements: UByte): UByteArray = elements\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin\n\nimport kotlin.jvm.*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@JvmInline\npublic
value class UIntArray\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: IntArray) :
Collection<UInt> {\n\n    /** Creates a new array of the specified [size], with all elements initialized to zero. *\n
public constructor(size: Int) : this(IntArray(size))\n\n    /**\n     * Returns the array element at the given [index].
This method can be called using the index operator.\n     *\n     * If the [index] is out of bounds of this array, throws
an [IndexOutOfBoundsException] except in Kotlin/JS\n     * where the behavior is unspecified.\n     *\n     public
operator fun get(index: Int): UInt = storage[index].toInt()\n\n    /**\n     * Sets the element at the given [index] to
the given [value]. This method can be called using the index operator.\n     *\n     * If the [index] is out of bounds of
this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n     * where the behavior is unspecified.\n
*\n     *\n     public operator fun set(index: Int, value: UInt) {\n        storage[index] = value.toInt()\n    }\n\n    /** Returns
the number of elements in the array. *\n     public override val size: Int get() = storage.size\n\n    /** Creates an
iterator over the elements of the array. *\n     public override operator fun iterator(): kotlin.collections.Iterator<UInt>
= Iterator(storage)\n\n    @Suppress("DEPRECATION_ERROR")\n    private class Iterator(private val array:
IntArray) : UIntIterator() {\n        private var index = 0\n        override fun hasNext() = index < array.size\n
override fun nextUInt() = if (index < array.size) array[index++].toInt() else throw
NoSuchElementException(index.toString())\n    }\n\n    override fun contains(element: UInt): Boolean {\n        //
TODO: Eliminate this check after KT-30016 gets fixed.\n        // Currently JS BE does not generate special bridge
method for this method.\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UInt) return
false\n        return storage.contains(element.toInt())\n    }\n\n    override fun containsAll(elements:
Collection<UInt>): Boolean {\n        return (elements as Collection<*>).all { it is UInt &&
storage.contains(it.toInt()) }\n    }\n\n    override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n/**\n *
Creates a new array of the specified [size], where each element is calculated by calling the specified\n * [init]
function.\n * *\n * The function [init] is called for each array element sequentially starting from the first one.\n * It
should return the value for an array element given its index.\n
*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray(size: Int, init: (Int) -> UInt): UIntArray {\n    return UIntArray(IntArray(size) { index ->
init(index).toInt()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
uintArrayOf(vararg elements: UInt): UIntArray = elements\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin\n\nimport kotlin.jvm.*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@JvmInline\npublic
value class ULongArray\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: LongArray) :
Collection<ULong> {\n\n    /** Creates a new array of the specified [size], with all elements initialized to zero. *\n
public constructor(size: Int) : this(LongArray(size))\n\n    /**\n     * Returns the array element at the given [index].
This method can be called using the index operator.\n     *\n     * If the [index] is out of bounds of this array, throws
an [IndexOutOfBoundsException] except in Kotlin/JS\n     * where the behavior is unspecified.\n     *\n     public
operator fun get(index: Int): ULong = storage[index].toULong()\n\n    /**\n     * Sets the element at the given
[index] to the given [value]. This method can be called using the index operator.\n     *\n     * If the [index] is out of
bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n     * where the behavior is
unspecified.\n     *\n     *\n     public operator fun set(index: Int, value: ULong) {\n        storage[index] = value.toLong()\n
    }\n\n    /** Returns the number of elements in the array. *\n     public override val size: Int get() = storage.size\n\n
    /** Creates an iterator over the elements of the array. *\n     public override operator fun iterator():
kotlin.collections.Iterator<ULong> = Iterator(storage)\n\n    @Suppress("DEPRECATION_ERROR")\n    private
class Iterator(private val array: LongArray) : ULongIterator() {\n        private var index = 0\n        override fun

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hasNext() = index < array.size\n    override fun nextULong() = if (index < array.size) array[index++].toULong()
else throw NoSuchElementException(index.toString())\n    }\n\n    override fun contains(element: ULong): Boolean
{\n    // TODO: Eliminate this check after KT-30016 gets fixed.\n    // Currently JS BE does not generate
special bridge method for this method.\n    @Suppress("USELESS_CAST")\n    if ((element as Any?) !is
ULong) return false\n\n    return storage.contains(element.toLong())\n    }\n\n    override fun
containsAll(elements: Collection<ULong>): Boolean {\n    return (elements as Collection<*>).all { it is ULong
&& storage.contains(it.toLong()) }\n    }\n\n    override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n/**
 * Creates a new array of the specified [size], where each element is calculated by calling the specified\n * [init]
function.\n * \n * The function [init] is called for each array element sequentially starting from the first one.\n * It
should return the value for an array element given its index.\n
*\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray(size: Int, init: (Int) -> ULong): ULongArray {\n    return ULongArray(LongArray(size) { index ->
init(index).toLong()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ulongArrayOf(vararg elements: ULong): ULongArray = elements\n"/*\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin\n\nimport kotlin.jvm.*\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@JvmInline\npublic
value class UShortArray\n@PublishedApi\ninternal constructor(@PublishedApi internal val storage: ShortArray) :
Collection<UShort> {\n\n    /** Creates a new array of the specified [size], with all elements initialized to zero. *\n
    public constructor(size: Int) : this(ShortArray(size))\n\n    /**\n    * Returns the array element at the given [index].
This method can be called using the index operator.\n    *\n    * If the [index] is out of bounds of this array, throws
an [IndexOutOfBoundsException] except in Kotlin/JS\n    * where the behavior is unspecified.\n    *\n    public
operator fun get(index: Int): UShort = storage[index].toUShort()\n\n    /**\n    * Sets the element at the given
[index] to the given [value]. This method can be called using the index operator.\n    *\n    * If the [index] is out of
bounds of this array, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n    * where the behavior is
unspecified.\n    *\n    public operator fun set(index: Int, value: UShort) {\n        storage[index] = value.toShort()\n
}\n\n    /** Returns the number of elements in the array. *\n    public override val size: Int get() = storage.size\n\n
/** Creates an iterator over the elements of the array. *\n    public override operator fun iterator():
kotlin.collections.Iterator<UShort> = Iterator(storage)\n\n    @Suppress("DEPRECATION_ERROR")\n    private
class Iterator(private val array: ShortArray) : UShortIterator() {\n        private var index = 0\n        override fun
hasNext() = index < array.size\n        override fun nextUShort() = if (index < array.size) array[index++].toUShort()
else throw NoSuchElementException(index.toString())\n    }\n\n    override fun contains(element: UShort): Boolean
{\n        // TODO: Eliminate this check after KT-30016 gets fixed.\n        // Currently JS BE does not generate
special bridge method for this method.\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is
UShort) return false\n\n        return storage.contains(element.toShort())\n    }\n\n    override fun
containsAll(elements: Collection<UShort>): Boolean {\n        return (elements as Collection<*>).all { it is UShort
&& storage.contains(it.toShort()) }\n    }\n\n    override fun isEmpty(): Boolean = this.storage.size == 0\n}\n\n/**
 * Creates a new array of the specified [size], where each element is calculated by calling the specified\n * [init]
function.\n * \n * The function [init] is called for each array element sequentially starting from the first one.\n * It
should return the value for an array element given its index.\n
*\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray(size: Int, init: (Int) -> UShort): UShortArray {\n    return UShortArray(ShortArray(size) { index ->
init(index).toShort()
})\n}\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ushortArrayOf(vararg elements: UShort): UShortArray = elements\n"/*\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n

```

\*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName(\"UArraysKt\")\n@file:kotlin.jvm.JvmPackageName(\"kotlin.collections.unsigned\")\n\npackage kotlin.collections\n\n/\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:

https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.\*\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/\*\*\n \* Returns 1st \*element\* from the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component1(): UInt {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component1(): ULong {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component1(): UByte {\n return get(0)\n}\n\n/\*\*\n \* Returns 1st \*element\* from the array.\n \* \n \* If the size of this array is less than 1, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component1(): UShort {\n return get(0)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \* If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component2(): UInt {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \* If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component2(): ULong {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \* If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component2(): UByte {\n return get(1)\n}\n\n/\*\*\n \* Returns 2nd \*element\* from the array.\n \* \n \* If the size of this array is less than 2, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UShortArray.component2(): UShort {\n return get(1)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UIntArray.component3(): UInt {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun ULongArray.component3(): ULong {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

\n@SinceKotlin(\"1.3\")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun UByteArray.component3(): UByte {\n return get(2)\n}\n\n/\*\*\n \* Returns 3rd \*element\* from the array.\n \* \n \* If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS\n \* where the behavior is unspecified.\n \*/

If the size of this array is less than 3, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior is unspecified.

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component3(): UShort {\n    return get(2)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n *  
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the  
behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UIntArray.component4(): UInt {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n *  
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior  
is unspecified.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline operator fun  
ULongArray.component4(): ULong {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from  
the array.\n * \n *  
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in  
Kotlin/JS where the behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UByteArray.component4(): UByte {\n    return get(3)\n}\n\n/**\n * Returns 4th *element* from the array.\n * \n *  
If the size of this array is less than 4, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the  
behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component4(): UShort {\n    return get(3)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n *  
If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the  
behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UIntArray.component5(): UInt {\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n *  
If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the behavior  
is unspecified.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic  
inline operator fun  
ULongArray.component5(): ULong {\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from  
the array.\n * \n *  
If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in  
Kotlin/JS where the behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UByteArray.component5(): UByte {\n    return get(4)\n}\n\n/**\n * Returns 5th *element* from the array.\n * \n *  
If the size of this array is less than 5, throws an [IndexOutOfBoundsException] except in Kotlin/JS where the  
behavior is unspecified.
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline operator fun  
UShortArray.component5(): UShort {\n    return get(4)\n}\n\n/**\n * Returns an element at the given [index] or  
throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n * \n *  
@sample  
samples.collections.Collections.Elements.elementAt
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UIntArray.elementAt(index: Int):  
UInt\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is  
out of bounds of this array.\n * \n *  
@sample samples.collections.Collections.Elements.elementAt
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun ULongArray.elementAt(index: Int):  
ULong\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index]  
is out of bounds of this array.\n * \n *  
@sample samples.collections.Collections.Elements.elementAt
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UByteArray.elementAt(index: Int):  
UByte\n\n/**\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index]  
is out of bounds of this array.\n * \n *  
@sample samples.collections.Collections.Elements.elementAt
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UShortArray.elementAt(index: Int):  
UShort\n\n/**\n * Returns an element at the given [index] or the result of calling the [defaultValue] function if the  
[index] is out of bounds of this array.\n * \n *  
@sample
```

```

samples.collections.Collections.Elements.elementAtOrElse\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UInt): UInt {\n  return if (index >= 0 && index <=
lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result of
calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.elementAtOrElse(index: Int, defaultValue: (Int) -> ULong): ULong {\n  return if (index >= 0 &&
index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the
result of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UByte): UByte {\n  return if (index >= 0 && index
<= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or the result
of calling the [defaultValue] function if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrElse\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.elementAtOrElse(index: Int, defaultValue: (Int) -> UShort): UShort {\n  return if (index >= 0 &&
index <= lastIndex) get(index) else defaultValue(index)\n}\n\n/**\n * Returns an element at the given [index] or
`null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.elementAtOrNull(index: Int): UInt? {\n  return this.getOrNull(index)\n}\n\n/**\n * Returns an element
at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.elementAtOrNull(index: Int): ULong? {\n  return this.getOrNull(index)\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.elementAtOrNull(index: Int): UByte? {\n  return this.getOrNull(index)\n}\n\n/**\n * Returns an
element at the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.elementAtOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.elementAtOrNull(index: Int): UShort? {\n  return this.getOrNull(index)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.find(predicate: (UInt) -> Boolean): UInt? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns the
first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.find(predicate: (ULong) -> Boolean): ULong? {\n  return firstOrNull(predicate)\n}\n\n/**\n *
Returns the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.find(predicate: (UByte) -> Boolean): UByte? {\n  return firstOrNull(predicate)\n}\n\n/**\n * Returns
the first element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample

```

```

samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.find(predicate: (UShort) -> Boolean): UShort? {\n    return firstOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.findLast(predicate: (UInt) -> Boolean): UInt? {\n    return lastOrNull(predicate)\n}\n\n/**\n * Returns the
last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.findLast(predicate: (ULong) -> Boolean): ULong? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.findLast(predicate: (UByte) -> Boolean): UByte? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns the last element matching the given [predicate], or `null` if no such element was found.\n * \n * @sample
samples.collections.Collections.Elements.find\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.findLast(predicate: (UShort) -> Boolean): UShort? {\n    return lastOrNull(predicate)\n}\n\n/**\n *
Returns first element.\n * @throws [NoSuchElementException] if the array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.first(): UInt {\n    return storage.first().toUInt()\n}\n\n/**\n * Returns first element.\n * @throws
[NoSuchElementException] if the array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.first(): ULong {\n    return storage.first().toULong()\n}\n\n/**\n * Returns first element.\n * @throws
[NoSuchElementException] if the array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.first(): UByte {\n    return storage.first().toUByte()\n}\n\n/**\n * Returns first element.\n * @throws
[NoSuchElementException] if the array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.first(): UShort {\n    return storage.first().toUShort()\n}\n\n/**\n * Returns the first element matching
the given [predicate].\n * @throws [NoSuchElementException] if no such element is found.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.first(predicate: (UInt) -> Boolean): UInt {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.first(predicate: (ULong) -> Boolean): ULong {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.first(predicate: (UByte) -> Boolean): UByte {\n    for (element in this) if (predicate(element)) return
element\n    throw NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n *
Returns the first element matching the given [predicate].\n * @throws [NoSuchElementException] if no such
element is found.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

```

```

UShortArray.first(predicate: (UShort) -> Boolean): UShort {
    for (element in this) if (predicate(element)) return element
    throw NoSuchElementException("Array contains no element matching the predicate.")
}
Returns the first element, or `null` if the array is empty.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UIntArray.firstOrNull(): UInt? {
    return if (isEmpty()) null else this[0]
}
Returns the first element, or `null` if the array is empty.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun ULongArray.firstOrNull(): ULong? {
    return if (isEmpty()) null else this[0]
}
Returns the first element, or `null` if the array is empty.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UByteArray.firstOrNull(): UByte? {
    return if (isEmpty()) null else this[0]
}
Returns the first element, or `null` if the array is empty.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UShortArray.firstOrNull(predicate: (UShort) -> Boolean): UShort? {
    return if (isEmpty()) null else this[0]
}
Returns the first element matching the given [predicate], or `null` if element was not found.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UIntArray.firstOrNull(predicate: (UInt) -> Boolean): UInt? {
    for (element in this) if (predicate(element)) return element
    return null
}
Returns the first element matching the given [predicate], or `null` if element was not found.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun ULongArray.firstOrNull(predicate: (ULong) -> Boolean): ULong? {
    for (element in this) if (predicate(element)) return element
    return null
}
Returns the first element matching the given [predicate], or `null` if element was not found.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UByteArray.firstOrNull(predicate: (UByte) -> Boolean): UByte? {
    for (element in this) if (predicate(element)) return element
    return null
}
Returns the first element matching the given [predicate], or `null` if element was not found.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UShortArray.firstOrNull(predicate: (UShort) -> Boolean): UShort? {
    for (element in this) if (predicate(element)) return element
    return null
}
Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UIntArray.getOrNull(index: Int, defaultValue: (Int) -> UInt): UInt {
    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)
}
Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun ULongArray.getOrNull(index: Int, defaultValue: (Int) -> ULong): ULong {
    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)
}
Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UByteArray.getOrNull(index: Int, defaultValue: (Int) -> UByte): UByte {
    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)
}
Returns an element at the given [index] or the result of calling the [defaultValue] function if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun UShortArray.getOrNull(index: Int, defaultValue: (Int) -> UShort): UShort {
    return if (index >= 0 && index <= lastIndex) get(index) else defaultValue(index)
}
Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun UIntArray.getOrNull(index: Int): UInt? {
    return if (index >= 0 && index <= lastIndex) get(index) else null
}
Returns an element at the given [index] or `null` if the [index] is out of bounds of this array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public fun ULongArray.getOrNull(index: Int):

```

```

ULong? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at
the given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.getOrNull(index: Int): UByte?
{\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns an element at the
given [index] or `null` if the [index] is out of bounds of this array.\n * \n * @sample
samples.collections.Collections.Elements.getOrNull\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.getOrNull(index: Int):
UShort? {\n    return if (index >= 0 && index <= lastIndex) get(index) else null\n}\n\n/**\n * Returns first index of
[element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.indexOf(element: UInt): Int {\n    return storage.indexOf(element.toInt())\n}\n\n/**\n * Returns first
index of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.indexOf(element: ULong): Int {\n    return storage.indexOf(element.toLong())\n}\n\n/**\n * Returns
first index of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.indexOf(element: UByte): Int {\n    return storage.indexOf(element.toByte())\n}\n\n/**\n * Returns
first index of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.indexOf(element: UShort): Int {\n    return storage.indexOf(element.toShort())\n}\n\n/**\n * Returns
index of the first element matching the given [predicate], or -1 if the array does not contain such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.indexOfFirst(predicate: (UInt) -> Boolean): Int {\n    return storage.indexOfFirst { predicate(it.toUInt())
}\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the array does not contain
such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.indexOfFirst(predicate: (ULong) -> Boolean): Int {\n    return storage.indexOfFirst {
predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the
array does not contain such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.indexOfFirst(predicate: (UByte) -> Boolean): Int {\n    return storage.indexOfFirst {
predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the first element matching the given [predicate], or -1 if the
array does not contain such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.indexOfFirst(predicate: (UShort) -> Boolean): Int {\n    return storage.indexOfFirst {
predicate(it.toUShort()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the
array does not contain such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.indexOfLast(predicate: (UInt) -> Boolean): Int {\n    return storage.indexOfLast { predicate(it.toUInt())
}\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the array does not contain
such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.indexOfLast(predicate: (ULong) -> Boolean): Int {\n    return storage.indexOfLast {
predicate(it.toULong()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the
array does not contain such element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.indexOfLast(predicate: (UByte) -> Boolean): Int {\n    return storage.indexOfLast {
predicate(it.toUByte()) }\n}\n\n/**\n * Returns index of the last element matching the given [predicate], or -1 if the
array does not contain such element.\n

```

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.indexOfLast(predicate: (UShort) -> Boolean): Int {\n    return storage.indexOfLast {
predicate(it.toUShort()) }\n}\n\n/**\n * Returns the last element.\n * \n * @throws NoSuchElementException if the
array is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.last(): UInt {\n    return storage.last().toUInt()\n}\n\n/**\n * Returns the last element.\n * \n * @throws
NoSuchElementException if the array is empty.\n * \n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.last(): ULong {\n    return storage.last().toULong()\n}\n\n/**\n * Returns the last element.\n * \n *
@throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.last(): UByte {\n    return storage.last().toUByte()\n}\n\n/**\n * Returns the last element.\n * \n *
@throws NoSuchElementException if the array is empty.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.last(): UShort {\n    return storage.last().toUShort()\n}\n\n/**\n * Returns the last element matching
the given [predicate].\n * \n * @throws NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.last(predicate: (UInt) -> Boolean): UInt {\n    for (index in this.indices.reversed()) {\n        val element =
this[index]\n        if (predicate(element)) return element\n    }\n    throw NoSuchElementException("Array contains
no element matching the predicate.")\n}\n\n/**\n * Returns the last element matching the given [predicate].\n * \n *
@throws NoSuchElementException if no such element is found.\n * \n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.last(predicate: (ULong) -> Boolean): ULong {\n    for (index in this.indices.reversed()) {\n        val
element = this[index]\n        if (predicate(element)) return element\n    }\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the last
element matching the given [predicate].\n * \n * @throws NoSuchElementException if no such element is found.\n *
\n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.last(predicate: (UByte) -> Boolean): UByte {\n    for (index in this.indices.reversed()) {\n        val
element = this[index]\n        if (predicate(element)) return element\n    }\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns the last
element matching the given [predicate].\n * \n * @throws NoSuchElementException if no such element is found.\n *
\n * @sample samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.last(predicate: (UShort) -> Boolean): UShort {\n    for (index in this.indices.reversed()) {\n        val
element = this[index]\n        if (predicate(element)) return element\n    }\n    throw
NoSuchElementException("Array contains no element matching the predicate.")\n}\n\n/**\n * Returns last index
of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.lastIndexOf(element: UInt): Int {\n    return storage.lastIndexOf(element.toInt())\n}\n\n/**\n * Returns
last index of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.lastIndexOf(element: ULong): Int {\n    return storage.lastIndexOf(element.toLong())\n}\n\n/**\n *
Returns last index of [element], or -1 if the array does not contain element.\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.lastIndexOf(element: UByte): Int {\n    return storage.lastIndexOf(element.toByte())\n}\n\n/**\n *
Returns last index of [element], or -1 if the array does not contain element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.lastIndexOf(element: UShort): Int {\n    return storage.lastIndexOf(element.toShort())\n}\n\n/**\n *
Returns the last element, or `null` if the array is empty.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UIntArray.lastOrNull(): UInt? {\n    return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n *
Returns the last
element, or `null` if the array is empty.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.lastOrNull(): ULong? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n *
Returns the last element, or `null` if the array is empty.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.lastOrNull(): UByte? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n *
Returns the last element, or `null` if the array is empty.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.lastOrNull(): UShort? {\n
return if (isEmpty()) null else this[size - 1]\n}\n\n/**\n *
Returns the last element matching the given [predicate], or
`null` if no such element was found.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.lastOrNull(predicate: (UInt) -> Boolean): UInt? {\n    for (index in this.indices.reversed()) {\n        val
element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n *
Returns the last
element matching the given [predicate], or `null` if no such element was found.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.lastOrNull(predicate: (ULong) -> Boolean): ULong? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n *
Returns the
last element matching the given [predicate], or `null` if no such element was found.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.lastOrNull(predicate: (UByte) -> Boolean): UByte? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n *
Returns the
last element matching the given [predicate], or `null` if no such element was found.\n
\n * @sample
samples.collections.Collections.Elements.last\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.lastOrNull(predicate: (UShort) -> Boolean): UShort? {\n    for (index in this.indices.reversed()) {\n
val element = this[index]\n        if (predicate(element)) return element\n    }\n    return null\n}\n\n/**\n *
Returns a
random element from this array.\n
\n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.random(): UInt {\n    return random(Random)\n}\n\n/**\n *
Returns a random element from this array.\n
\n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.random(): ULong {\n    return random(Random)\n}\n\n/**\n *
Returns a random element from this
array.\n
\n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.random(): UByte {\n    return random(Random)\n}\n\n/**\n *
Returns a random element from this
array.\n
\n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.random(): UShort {\n    return random(Random)\n}\n\n/**\n *
Returns a random element from this

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array using the specified source of randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.random(random: Random): UInt
{\n if (isEmpty())\n throw NoSuchElementException("Array is empty.")\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.random(random: Random):
ULong {\n if (isEmpty())\n throw NoSuchElementException("Array is empty.")\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.random(random: Random):
UByte {\n if (isEmpty())\n throw NoSuchElementException("Array is empty.")\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness.\n * \n * @throws NoSuchElementException if this array is empty.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.random(random: Random):
UShort {\n if (isEmpty())\n throw NoSuchElementException("Array is empty.")\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UIntArray.randomOrNull(): UInt? {\n return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun ULongArray.randomOrNull(): ULong? {\n return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UByteArray.randomOrNull(): UByte? {\n return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UShortArray.randomOrNull(): UShort? {\n return
randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\np
ublic fun UIntArray.randomOrNull(random: Random): UInt? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\np
ublic fun ULongArray.randomOrNull(random: Random): ULong? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\np
ublic fun UByteArray.randomOrNull(random: Random): UByte? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns a random element from this array using the specified source of
randomness, or `null` if this array is empty.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\np
ublic fun UShortArray.randomOrNull(random: Random): UShort? {\n if (isEmpty())\n return null\n return
get(random.nextInt(size))\n}\n\n/**\n * Returns the single element, or throws an exception if the array is empty or
has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.single(): UInt {\n return storage.single().toUInt()\n}\n\n/**\n * Returns the single element, or throws an
exception if the array is empty or has more than one element.\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.single(): ULong {\n    return storage.single().toULong()\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.single(): UByte {\n    return storage.single().toUByte()\n}\n\n/**\n * Returns the single element, or
throws an exception if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.single(): UShort {\n    return storage.single().toUShort()\n}\n\n/**\n * Returns the single element
matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.single(predicate: (UInt) -> Boolean): UInt {\n    var single: UInt? = null\n    var found = false\n    for
(element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as UInt\n}\n\n/**\n * Returns the single element matching
the given [predicate], or throws exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.single(predicate: (ULong) -> Boolean): ULong {\n    var single: ULong? = null\n    var found = false\n
for (element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as ULong\n}\n\n/**\n * Returns the single element
matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.single(predicate: (UByte) -> Boolean): UByte {\n    var single: UByte? = null\n    var found = false\n
for (element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as UByte\n}\n\n/**\n * Returns the single element
matching the given [predicate], or throws exception if there is no or more than one matching element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.single(predicate: (UShort) -> Boolean): UShort {\n    var single: UShort? = null\n    var found = false\n
for (element in this) {\n        if (predicate(element)) {\n            if (found) throw IllegalArgumentException("Array
contains more than one matching element.")\n            single = element\n            found = true\n        }\n    }\n    if
(!found) throw NoSuchElementException("Array contains no element matching the predicate.")\n    @Suppress("UNCHECKED_CAST")\n    return single as UShort\n}\n\n/**\n * Returns single element, or `null` if
the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.singleOrNull(): UInt? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.singleOrNull(): ULong? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single
element, or `null` if the array is empty or has more than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.singleOrNull(): UByte? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns single element, or `null` if the array is empty or has more
than one element.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.singleOrNull(): UShort? {\n    return if (size == 1) this[0] else null\n}\n\n/**\n * Returns the single
element matching the given [predicate], or `null` if element was not found or more than one element was found.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

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UIntArray.singleOrNull(predicate: (UInt) -> Boolean): UInt? {\n  var single: UInt? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n  }\n  if (!found) return null\n  return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.singleOrNull(predicate: (ULong) -> Boolean): ULong? {\n  var single: ULong? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n  }\n  if (!found) return null\n  return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.singleOrNull(predicate: (UByte) -> Boolean): UByte? {\n  var single: UByte? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n  }\n  if (!found) return null\n  return single\n}\n\n/**\n * Returns the single element matching the given [predicate], or `null` if element was not found or more than one element was found.\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.singleOrNull(predicate: (UShort) -> Boolean): UShort? {\n  var single: UShort? = null\n  var found = false\n  for (element in this) {\n    if (predicate(element)) {\n      if (found) return null\n      single = element\n      found = true\n    }\n  }\n  if (!found) return null\n  return single\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n */\n\n@sample samples.collections.Collections.Transformations.drop\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.drop(n: Int): List<UInt> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.drop(n: Int): List<ULong> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.drop(n: Int): List<UByte> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.drop(n: Int): List<UShort> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return takeLast((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.dropLast(n: Int): List<UInt> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.drop\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.dropLast(n: Int): List<ULong> {\n  require(n >= 0) { \"Requested element count $n is less than zero.\" }\n  return take((size - n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws

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IllegalArgumentException if [n] is negative.\n \* \n \* @sample  
samples.collections.Collections.Transformations.drop\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.dropLast(n: Int): List<UByte>  
{\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size -  
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last [n] elements.\n * \n * @throws  
IllegalArgumentException if [n] is negative.\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.dropLast(n: Int):  
List<UShort> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    return take((size -  
n).coerceAtLeast(0))\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given  
[predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.dropLastWhile(predicate: (UInt) -> Boolean): List<UInt> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.dropLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n    for (index in lastIndex downTo 0)  
{\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.dropLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n    for (index in lastIndex downTo 0)  
{\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return emptyList()\n}\n\n/**\n * Returns a list containing all elements except last elements that satisfy the given [predicate].\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.dropLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n    for (index in lastIndex downTo  
0) {\n        if (!predicate(this[index])) {\n            return take(index + 1)\n        }\n    }\n    return  
emptyList()\n}\n\n/**\n * Returns a list containing all elements except first elements that satisfy the given  
[predicate].\n * \n * @sample samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.dropWhile(predicate: (UInt) -> Boolean): List<UInt> {\n    var yielding = false\n    val list =  
ArrayList<UInt>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing all  
elements except first elements that satisfy the given [predicate].\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.dropWhile(predicate: (ULong) -> Boolean): List<ULong> {\n    var yielding = false\n    val list =  
ArrayList<ULong>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing all  
elements except first elements that satisfy the given [predicate].\n * \n * @sample  
samples.collections.Collections.Transformations.drop\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.dropWhile(predicate: (UByte) -> Boolean): List<UByte> {\n    var yielding = false\n    val list =  
ArrayList<UByte>()\n    for (item in this)\n        if (yielding)\n            list.add(item)\n        else if (!predicate(item)) {\n            list.add(item)\n            yielding = true\n        }\n    return list\n}\n\n/**\n * Returns a list containing all  
elements except first elements that satisfy the given [predicate].\n * \n * @sample
```

```

samples.collections.Collections.Transformations.drop\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.dropWhile(predicate: (UShort) -> Boolean): List<UShort> {\n  var yielding = false\n  val list =
ArrayList<UShort>()\n  for (item in this)\n    if (yielding)\n      list.add(item)\n    else if (!predicate(item))\n      list.add(item)\n      yielding = true\n  }\n  return list\n}\n\n/**\n * Returns a list containing only
elements matching the given [predicate].\n * \n * @sample samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.filter(predicate: (UInt) -> Boolean): List<UInt> {\n  return filterTo(ArrayList<UInt>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.filter(predicate: (ULong) -> Boolean): List<ULong> {\n  return filterTo(ArrayList<ULong>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.filter(predicate: (UByte) -> Boolean): List<UByte> {\n  return filterTo(ArrayList<UByte>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * \n * @sample
samples.collections.Collections.Filtering.filter\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.filter(predicate: (UShort) -> Boolean): List<UShort> {\n  return filterTo(ArrayList<UShort>(),
predicate)\n}\n\n/**\n * Returns a list containing only elements matching the given [predicate].\n * @param
[predicate] function that takes the index of an element and the element itself\n * and returns the result of predicate
evaluation on the element.\n * \n * @sample samples.collections.Collections.Filtering.filterIndexed\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.filterIndexed(predicate: (index: Int, UInt) -> Boolean): List<UInt> {\n  return
filterIndexedTo(ArrayList<UInt>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.filterIndexed(predicate: (index: Int, ULong) -> Boolean): List<ULong> {\n  return
filterIndexedTo(ArrayList<ULong>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.filterIndexed(predicate: (index: Int, UByte) -> Boolean): List<UByte> {\n  return
filterIndexedTo(ArrayList<UByte>(), predicate)\n}\n\n/**\n * Returns a list containing only elements matching the
given [predicate].\n * @param [predicate] function that takes the index of an element and the element itself\n * and
returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexed\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.filterIndexed(predicate: (index: Int, UShort) -> Boolean): List<UShort> {\n  return
filterIndexedTo(ArrayList<UShort>(), predicate)\n}\n\n/**\n * Appends all elements matching the given [predicate]
to the given [destination].\n * @param [predicate] function that takes the index of an element and the element
itself\n * and returns the result of predicate evaluation on the element.\n * \n * @sample
samples.collections.Collections.Filtering.filterIndexedTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :

```



```

all elements not matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UByte>> UByteArray.filterNotTo(destination: C, predicate: (UByte) -> Boolean): C {\n for
(element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all
elements not matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UShort>> UShortArray.filterNotTo(destination: C, predicate: (UShort) -> Boolean): C {\n
for (element in this) if (!predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends
all elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UInt>> UIntArray.filterTo(destination: C, predicate: (UInt) -> Boolean): C {\n for (element
in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all elements
matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in ULong>> ULongArray.filterTo(destination: C, predicate: (ULong) -> Boolean): C {\n for
(element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all
elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UByte>> UByteArray.filterTo(destination: C, predicate: (UByte) -> Boolean): C {\n for
(element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Appends all
elements matching the given [predicate] to the given [destination].\n * \n * @sample
samples.collections.Collections.Filtering.filterTo\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <C :
MutableCollection<in UShort>> UShortArray.filterTo(destination: C, predicate: (UShort) -> Boolean): C {\n for
(element in this) if (predicate(element)) destination.add(element)\n return destination\n}\n\n/**\n * Returns a list
containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.slice(indices: IntRange):
List<UInt> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive +
1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.slice(indices: IntRange):
List<ULong> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive
+ 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.slice(indices: IntRange):
List<UByte> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive
+ 1).asList()\n}\n\n/**\n * Returns a list containing elements at indices in the specified [indices] range.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.slice(indices: IntRange):
List<UShort> {\n if (indices.isEmpty()) return listOf()\n return copyOfRange(indices.start, indices.endInclusive
+ 1).asList()\n}\n\n/**\n * Returns a list containing elements at specified [indices].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.slice(indices: Iterable<Int>):
List<UInt> {\n val size = indices.collectionSizeOrDefault(10)\n if (size == 0) return emptyList()\n val list =
ArrayList<UInt>(size)\n for (index in indices) {\n list.add(get(index))\n }\n return list\n}\n\n/**\n *
Returns a list containing elements at specified [indices].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.slice(indices: Iterable<Int>):

```

```

List<ULong> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<ULong>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

Returns a list containing elements at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UByteArray.slice(indices: Iterable<Int>):
List<UByte> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<UByte>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

Returns a list containing elements at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UShortArray.slice(indices: Iterable<Int>):
List<UShort> {
    val size = indices.collectionSizeOrDefault(10)
    if (size == 0) return emptyList()
    val list = ArrayList<UShort>(size)
    for (index in indices) {
        list.add(get(index))
    }
    return list
}

Returns an array containing elements of this array at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UIntArray.sliceArray(indices:
Collection<Int>): UIntArray {
    return UIntArray(storage.sliceArray(indices))
}

Returns an array containing elements of this array at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun ULongArray.sliceArray(indices:
Collection<Int>): ULongArray {
    return ULongArray(storage.sliceArray(indices))
}

Returns an array containing elements of this array at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UByteArray.sliceArray(indices:
Collection<Int>): UByteArray {
    return UByteArray(storage.sliceArray(indices))
}

Returns an array containing elements of this array at specified [indices].

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UShortArray.sliceArray(indices:
Collection<Int>): UShortArray {
    return UShortArray(storage.sliceArray(indices))
}

Returns an array containing elements at indices in the specified [indices] range.

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UIntArray.sliceArray(indices: IntRange):
UIntArray {
    return UIntArray(storage.sliceArray(indices))
}

Returns an array containing elements at indices in the specified [indices] range.

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun ULongArray.sliceArray(indices: IntRange): ULongArray {
    return ULongArray(storage.sliceArray(indices))
}

Returns an array containing elements at indices in the specified [indices] range.

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UByteArray.sliceArray(indices: IntRange): UByteArray {
    return UByteArray(storage.sliceArray(indices))
}

Returns an array containing elements at indices in the specified [indices] range.

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UShortArray.sliceArray(indices: IntRange): UShortArray {
    return UShortArray(storage.sliceArray(indices))
}

Returns a list containing first [n] elements.

@throws IllegalArgumentException if [n] is negative.
@sample
samples.collections.Collections.Transformations.take

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun UIntArray.take(n: Int): List<UInt> {
    require(n >= 0) { "Requested element count $n is less than zero." }
    if (n == 0) return emptyList()
    if (n >= size) return toList()
    if (n == 1) return listOf(this[0])
    var count = 0
    val list = ArrayList<UInt>(n)
    for (item in this) {
        list.add(item)
        if (++count == n) break
    }
    return list
}

Returns a list containing first [n] elements.

@throws IllegalArgumentException if [n] is negative.
@sample
samples.collections.Collections.Transformations.take

* Since Kotlin("1.3") ExperimentalUnsignedTypes
public fun ULongArray.take(n: Int): List<ULong> {
    require(n >= 0) { "Requested element count $n is less than zero." }
    if (n == 0) return emptyList()
    if (n >= size) return toList()
    if (n == 1) return listOf(this[0])
    var count = 0
    val list = ArrayList<ULong>(n)
    for (item in this) {
        list.add(item)
        if (++count == n) break
    }
    return list
}

Returns a list containing first [n] elements.

@throws IllegalArgumentException if [n] is negative.
@sample
samples.collections.Collections.Transformations.take

```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.take(n: Int): List<UByte> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<UByte>(n)\n    for (item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns a list containing first [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.take(n: Int): List<UShort> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[0])\n    var count = 0\n    val list = ArrayList<UShort>(n)\n    for (item in this) {\n        list.add(item)\n        if (++count == n)\n            break\n    }\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.takeLast(n: Int): List<UInt> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<UInt>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.takeLast(n: Int): List<ULong> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<ULong>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.takeLast(n: Int): List<UByte> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<UByte>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last [n] elements.\n * \n * @throws IllegalArgumentException if [n] is negative.\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.takeLast(n: Int): List<UShort> {\n    require(n >= 0) { \"Requested element count $n is less than zero.\" }\n    if (n == 0) return emptyList()\n    val size = size\n    if (n >= size) return toList()\n    if (n == 1) return listOf(this[size - 1])\n    val list = ArrayList<UShort>(n)\n    for (index in size - n until size)\n        list.add(this[index])\n    return list\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.takeLastWhile(predicate: (UInt) -> Boolean): List<UInt> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index]))\n            return drop(index + 1)\n    }\n    return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.takeLastWhile(predicate: (ULong) -> Boolean): List<ULong> {\n    for (index in lastIndex downTo 0) {\n        if (!predicate(this[index]))\n            return drop(index + 1)\n    }\n    return toList()\n}\n\n/**\n * Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample samples.collections.Collections.Transformations.take\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.takeLastWhile(predicate: (UByte) -> Boolean): List<UByte> {\n    for (index in lastIndex downTo 0)\n
```

```

{\n    if (!predicate(this[index])) {\n        return drop(index + 1)\n    }\n } \n return toList()\n}\n\n/**\n *
Returns a list containing last elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.takeLastWhile(predicate: (UShort) -> Boolean): List<UShort> {\n    for (index in lastIndex downTo 0)
{\n        if (!predicate(this[index])) {\n            return drop(index + 1)\n        }\n    }\n    return toList()\n}\n\n/**\n *
Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.takeWhile(predicate: (UInt) -> Boolean): List<UInt> {\n    val list = ArrayList<UInt>()\n    for (item in
this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n *
Returns a list
containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.takeWhile(predicate: (ULong) -> Boolean): List<ULong> {\n    val list = ArrayList<ULong>()\n    for
(item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n *
Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.takeWhile(predicate: (UByte) -> Boolean): List<UByte> {\n    val list = ArrayList<UByte>()\n    for
(item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n *
Returns a list containing first elements satisfying the given [predicate].\n * \n * @sample
samples.collections.Collections.Transformations.take\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.takeWhile(predicate: (UShort) -> Boolean): List<UShort> {\n    val list = ArrayList<UShort>()\n    for
(item in this) {\n        if (!predicate(item))\n            break\n        list.add(item)\n    }\n    return list\n}\n\n/**\n *
Reverses elements in the array in-place.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reverse(): Unit {\n    storage.reverse()\n}\n\n/**\n *
Reverses elements in the array in-place.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reverse(): Unit {\n    storage.reverse()\n}\n\n/**\n *
Reverses elements in the array in-place.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reverse(): Unit {\n    storage.reverse()\n}\n\n/**\n *
Reverses elements in the array in the specified
range in-place.\n * \n * @param fromIndex the start of the range (inclusive) to reverse.\n * @param toIndex the end
of the range (exclusive) to reverse.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero
or [toIndex] is greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater
than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    storage.reverse(fromIndex,
toIndex)\n}\n\n/**\n *
Reverses elements of the array in the specified range in-place.\n * \n * @param fromIndex
the start of the range (inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n *
\n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of
this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    storage.reverse(fromIndex, toIndex)\n}\n\n/**\n *
Reverses elements of the array in the specified range in-place.\n * \n * @param fromIndex the start of the range
(inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws

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IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    storage.reverse(fromIndex, toIndex)\n}\n\n/**\n *
Reverses elements of the array in the specified range in-place.\n * \n * @param fromIndex the start of the range
(inclusive) to reverse.\n * @param toIndex the end of the range (exclusive) to reverse.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reverse(fromIndex: Int, toIndex: Int): Unit {\n    storage.reverse(fromIndex, toIndex)\n}\n\n/**\n *
Returns a list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UIntArray.reversed(): List<UInt> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.reversed(): List<ULong> {\n
if (isEmpty()) return emptyList()\n    val list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n *
Returns a list with elements in reversed order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.reversed(): List<UByte> {\n    if (isEmpty()) return emptyList()\n    val list = toMutableList()\n
list.reverse()\n    return list\n}\n\n/**\n * Returns a list with elements in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.reversed(): List<UShort> {\n
if (isEmpty()) return emptyList()\n    val list = toMutableList()\n    list.reverse()\n    return list\n}\n\n/**\n *
Returns an array with elements of this array in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reversedArray(): UIntArray {\n    return UIntArray(storage.reversedArray())\n}\n\n/**\n * Returns an
array with elements of this array in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reversedArray(): ULongArray {\n    return ULongArray(storage.reversedArray())\n}\n\n/**\n *
Returns an array with elements of this array in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reversedArray(): UByteArray {\n    return UByteArray(storage.reversedArray())\n}\n\n/**\n * Returns
an array with elements of this array in reversed order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reversedArray(): UShortArray {\n    return UShortArray(storage.reversedArray())\n}\n\n/**\n *
Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.shuffle(): Unit {\n
shuffle(Random)\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified [random]
instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.shuffle(random: Random): Unit
{\n    for (i in lastIndex downTo 1) {\n        val j = random.nextInt(i + 1)\n        val copy = this[i]\n        this[i] =
this[j]\n        this[j] = copy\n    }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n

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*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.shuffle(random: Random):
Unit {\n for (i in lastIndex downTo 1) {\n val j = random.nextInt(i + 1)\n val copy = this[i]\n this[i] =
this[j]\n this[j] = copy\n }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.shuffle(random: Random):
Unit {\n for (i in lastIndex downTo 1) {\n val j = random.nextInt(i + 1)\n val copy = this[i]\n this[i] =
this[j]\n this[j] = copy\n }\n}\n\n/**\n * Randomly shuffles elements in this array in-place using the specified
[random] instance as the source of randomness.\n * \n * See:
https://en.wikipedia.org/wiki/Fisher%20%80%93Yates\_shuffle#The\_modern\_algorithm\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.shuffle(random: Random):
Unit {\n for (i in lastIndex downTo 1) {\n val j = random.nextInt(i + 1)\n val copy = this[i]\n this[i] =
this[j]\n this[j] = copy\n }\n}\n\n/**\n * Sorts elements in the array in-place descending according to their
natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UIntArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements
in the array in-place descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortDescending(): Unit {\n if
(size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts elements in the array in-place descending
according to their natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.sortDescending(): Unit {\n if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Sorts
elements in the array in-place descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortDescending(): Unit {\n
if (size > 1) {\n sort()\n reverse()\n }\n}\n\n/**\n * Returns a list of all elements sorted according to their
natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sorted():
List<UInt> {\n return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted
according to their natural sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.sorted(): List<ULong> {\n return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all
elements sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sorted(): List<UByte> {\n
return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns a list of all elements sorted according to their natural
sort order.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sorted():
List<UShort> {\n return copyOf().apply { sort() }.asList()\n}\n\n/**\n * Returns an array with all elements of this
array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArray(): UIntArray {\n if
(isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements of
this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArray(): ULongArray
{\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all
elements of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArray(): UByteArray {\n
if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all elements
of this array sorted according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArray(): UShortArray
{\n if (isEmpty()) return this\n return this.copyOf().apply { sort() }\n}\n\n/**\n * Returns an array with all
elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedArrayDescending():
UIntArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n * Returns
an array with all elements of this array sorted descending according to their natural sort order.\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortedArrayDescending():
ULongArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n *
Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedArrayDescending():
UByteArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n *
Returns an array with all elements of this array sorted descending according to their natural sort order.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortedArrayDescending():
UShortArray {\n if (isEmpty()) return this\n return this.copyOf().apply { sortDescending() }\n}\n\n/**\n *
Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortedDescending(): List<UInt>
{\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted descending
according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve their order
relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.sortedDescending(): List<ULong> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n *
Returns a list of all elements sorted descending according to their natural sort order.\n * \n * The sort is _stable_. It
means that equal elements preserve their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortedDescending():
List<UByte> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n * Returns a list of all elements sorted
descending according to their natural sort order.\n * \n * The sort is _stable_. It means that equal elements preserve
their order relative to each other after sorting.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun UShortArray.sortedDescending(): List<UShort> {\n return copyOf().apply { sort() }.reversed()\n}\n\n/**\n *
Returns an array of type [ByteArray], which is a view of this array where each element is a signed reinterpretation\n
* of the corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.asByteArray(): ByteArray {\n return storage\n}\n\n/**\n * Returns an array of type [IntArray], which
is a view of this array where each element is a signed reinterpretation\n * of the corresponding element of this
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.asIntArray(): IntArray {\n return storage\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UIntArray.asList():
List<UInt>\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun ULongArray.asList():
List<ULong>\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UByteArray.asList():
List<UByte>\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic expect fun UShortArray.asList():
List<UShort>\n\n/**\n * Returns an array of type [LongArray], which is a view of this array where each element is
a signed reinterpretation\n * of the corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.asLongArray(): LongArray {\n return storage\n}\n\n/**\n * Returns an array of type [ShortArray],
which is a view of this array where each element is a signed reinterpretation\n * of the corresponding element of this
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.asShortArray(): ShortArray {\n return storage\n}\n\n/**\n * Returns an array of type [UByteArray],
which is a view of this array where each element is an unsigned reinterpretation\n * of the corresponding element of
this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun ByteArray.asUByteArray(): UByteArray {\n return UByteArray(this)\n}\n\n/**\n * Returns an array of type
[UIntArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.asUIntArray(): UIntArray {\n    return UIntArray(this)\n}\n\n/**\n * Returns an array of type
[UIntArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.asULongArray(): ULongArray {\n    return ULongArray(this)\n}\n\n/**\n * Returns an array of type
[ULongArray], which is a view of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.asUShortArray(): UShortArray {\n    return UShortArray(this)\n}\n\n/**\n * Returns `true` if the two
specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the
same order.\n * \n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray.contentEquals(other: UIntArray): Boolean {\n
return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal to
one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic infix fun ULongArray.contentEquals(other: ULongArray):
Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray.contentEquals(other: UByteArray): Boolean
{\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally* equal
to one another,\n * i.e. contain the same number of the same elements in the same order.\n * \n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray.contentEquals(other: UShortArray):
Boolean {\n    return this.contentEquals(other)\n}\n\n/**\n * Returns `true` if the two specified arrays are
*structurally* equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray?.contentEquals(other:
UIntArray?): Boolean {\n    return this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the two
specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements in the
same order.\n * \n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun
ULongArray?.contentEquals(other: ULongArray?): Boolean {\n    return
this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the two specified arrays are *structurally*
equal to one another,\n * i.e. contain the same number of the same elements in the same order.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray?.contentEquals(other:
UByteArray?): Boolean {\n    return this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns `true` if the
two specified arrays are *structurally* equal to one another,\n * i.e. contain the same number of the same elements
in the same order.\n * \n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic infix fun
UShortArray?.contentEquals(other: UShortArray?): Boolean {\n    return
this?.storage.contentEquals(other?.storage)\n}\n\n/**\n * Returns a hash code based on the contents of this array as
if it is [List].\n * \n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n

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*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.contentHashCode(): Int {\n    return
this.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it is [List].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray?.contentHashCode(): Int {\n
return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it
is [List].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray?.contentHashCode(): Int {\n    return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash
code based on the contents of this array as if it is [List].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray?.contentHashCode(): Int {\n
return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a hash code based on the contents of this array as if it
is [List].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray?.contentHashCode(): Int {\n    return this?.storage.contentHashCode()\n}\n\n/**\n * Returns a string
representation of the contents of the specified array as if it is [List].\n
\n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("Use Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.contentToString(): String {\n    return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n
\n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.contentToString(): String {\n    return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n
\n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.contentToString(): String {\n    return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n
\n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@Deprecated("Use
Kotlin compiler 1.4 to avoid deprecation
warning.\")\n@SinceKotlin("1.3")\n@DeprecatedSinceKotlin(hiddenSince =
"1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.contentToString(): String {\n    return
this.contentToString()\n}\n\n/**\n * Returns a string representation of the contents of the specified array as if it is
[List].\n
\n * @sample samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray?.contentToString(): String {\n
return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of
the specified array as if it is [List].\n
\n * @sample
samples.collections.Arrays.ContentOperations.contentToString\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray?.contentToString(): String {\n
return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of

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the specified array as if it is [List].\n \* \n \* @sample

samples.collections.Arrays.ContentOperations.contentToString\n

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*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray?.contentToString(): String {\n    return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Returns a string representation of the contents of\n * the specified array as if it is [List].\n * \n * @sample
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samples.collections.Arrays.ContentOperations.contentToString\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray?.contentToString(): String {\n    return this?.joinToString(", ", "[", "]") ?: "null"\n}\n\n/**\n * Copies this array or its subrange into the\n * [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even\n * specify the subrange so that it overlaps with the destination range.\n * \n * @param destination the array to copy\n * to.\n * @param destinationOffset the position in the [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy, 0 by default.\n * @param endIndex the end (exclusive)\n * of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or\n * [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex\n * > endIndex`.\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array\n * starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.copyInto(destination: UIntArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size):\nUIntArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return\n    destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the\n * destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the\n * [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy,\n * 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of\n * range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the\n * subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is\n * out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.copyInto(destination: ULongArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size):\nULongArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return\n    destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the\n * destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the\n * [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy,\n * 0 by default.\n * @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of\n * range of this array indices or when `startIndex > endIndex`.\n * @throws IndexOutOfBoundsException when the\n * subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is\n * out of the [destination] array indices range.\n * \n * @return the [destination] array.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.copyInto(destination: UByteArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = size):\nUByteArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return\n    destination\n}\n\n/**\n * Copies this array or its subrange into the [destination] array and returns that array.\n * \n * It's allowed to pass the same array in the [destination] and even specify the subrange so that it overlaps with the\n * destination range.\n * \n * @param destination the array to copy to.\n * @param destinationOffset the position in the\n * [destination] array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the subrange to copy,
```

0 by default.\n \* @param endIndex the end (exclusive) of the subrange to copy, size of this array by default.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n \* or when that index is out of the [destination] array indices range.\n \* \n \* @return the [destination] array.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.copyInto(destination: UShortArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int =\nsize): UShortArray {\n    storage.copyInto(destination.storage, destinationOffset, startIndex, endIndex)\n    return\ndestination\n}\n\n/**\n * Returns new array which is a copy of the original array.\n * \n * @sample\n samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.copyOf(): UIntArray {\n    return UIntArray(storage.copyOf())\n}\n\n/**\n * Returns new array which is\n a copy of the original array.\n * \n * @sample\n samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.copyOf(): ULongArray {\n    return ULongArray(storage.copyOf())\n}\n\n/**\n * Returns new array\n which is a copy of the original array.\n * \n * @sample\n samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.copyOf(): UByteArray {\n    return UByteArray(storage.copyOf())\n}\n\n/**\n * Returns new array\n which is a copy of the original array.\n * \n * @sample\n samples.collections.Arrays.CopyOfOperations.copyOfOf\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.copyOfOf(): UShortArray {\n    return UShortArray(storage.copyOfOf())\n}\n\n/**\n * Returns new array\n which is a copy of the original array, resized to the given [newSize].\n * The copy is either truncated or padded at\n the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the original array, the copy array\n is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original array, the extra elements in the\n copy array are filled with zero values.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUIntArray.copyOfOf(newSize: Int): UIntArray {\n    return UIntArray(storage.copyOfOf(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either\n truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the\n original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original\n array, the extra elements in the copy array are filled with zero values.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nULongArray.copyOfOf(newSize: Int): ULongArray {\n    return ULongArray(storage.copyOfOf(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either\n truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the\n original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original\n array, the extra elements in the copy array are filled with zero values.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.copyOfOf(newSize: Int): UByteArray {\n    return UByteArray(storage.copyOfOf(newSize))\n}\n\n/**\n * Returns new array which is a copy of the original array, resized to the given [newSize].\n * The copy is either\n truncated or padded at the end with zero values if necessary.\n * \n * - If [newSize] is less than the size of the\n original array, the copy array is truncated to the [newSize].\n * - If [newSize] is greater than the size of the original\n array, the extra elements in the copy array are filled with zero values.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.copyOfOf(newSize: Int): UShortArray {\n    return UShortArray(storage.copyOfOf(newSize))\n}\n\n/**\n * Returns a new array which is a copy of the specified range of the original array.\n * \n * @param fromIndex the start\n of the range (inclusive) to copy.\n * @param toIndex the end of the range (exclusive) to copy.\n * \n * @throws\n IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * \n
```

```

@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.copyOfRange(fromIndex: Int, toIndex: Int): UIntArray {\n    return
UIntArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n *
@param toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.copyOfRange(fromIndex: Int, toIndex: Int): ULongArray {\n    return
ULongArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n *
@param toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.copyOfRange(fromIndex: Int, toIndex: Int): UByteArray {\n    return
UByteArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Returns a new array which is a copy of the
specified range of the original array.\n * \n * @param fromIndex the start of the range (inclusive) to copy.\n *
@param toIndex the end of the range (exclusive) to copy.\n * \n * @throws IndexOutOfBoundsException if
[fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.copyOfRange(fromIndex: Int, toIndex: Int): UShortArray {\n    return
UShortArray(storage.copyOfRange(fromIndex, toIndex))\n}\n\n/**\n * Fills this array or its subrange with the
specified [element] value.\n * \n * @param fromIndex the start of the range (inclusive) to fill, 0 by default.\n *
@param toIndex the end of the range (exclusive) to fill, size of this array by default.\n * \n * @throws
IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n *
@throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.fill(element: UInt, fromIndex:
Int = 0, toIndex: Int = size): Unit {\n    storage.fill(element.toInt(), fromIndex, toIndex)\n}\n\n/**\n * Fills this array
or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range (inclusive) to
fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by default.\n *
@throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than the size of this
array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.fill(element: ULong,
fromIndex: Int = 0, toIndex: Int = size): Unit {\n    storage.fill(element.toLong(), fromIndex, toIndex)\n}\n\n/**\n *
Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range
(inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.fill(element: UByte,
fromIndex: Int = 0, toIndex: Int = size): Unit {\n    storage.fill(element.toByte(), fromIndex, toIndex)\n}\n\n/**\n *
Fills this array or its subrange with the specified [element] value.\n * \n * @param fromIndex the start of the range
(inclusive) to fill, 0 by default.\n * @param toIndex the end of the range (exclusive) to fill, size of this array by
default.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is greater than
the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.fill(element: UShort,

```

```

fromIndex: Int = 0, toIndex: Int = size): Unit {
    storage.fill(element.toShort(), fromIndex, toIndex)
}

Returns the range of valid indices for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val UIntArray.indices: IntRange
    get() = storage.indices

Returns the range of valid indices for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val ULongArray.indices: IntRange
    get() = storage.indices

Returns the range of valid indices for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val UByteArray.indices: IntRange
    get() = storage.indices

Returns the range of valid indices for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val UIntArray.lastIndex: Int
    get() = storage.lastIndex

Returns the last valid index for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val ULongArray.lastIndex: Int
    get() = storage.lastIndex

Returns the last valid index for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val UByteArray.lastIndex: Int
    get() = storage.lastIndex

Returns the last valid index for the array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public inline val UShortArray.lastIndex: Int
    get() = storage.lastIndex

Returns an array containing all elements of the original array and then the given
[element].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline
operator fun UIntArray.plus(element: UInt): UIntArray {
    return UIntArray(storage +
        element.toInt())

Returns an array containing all elements of the original array and then the given
[element].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline
operator fun ULongArray.plus(element: ULong): ULongArray {
    return ULongArray(storage +
        element.toLong())

Returns an array containing all elements of the original array and then the given
[element].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline
operator fun UByteArray.plus(element: UByte): UByteArray {
    return UByteArray(storage +
        element.toByte())

Returns an array containing all elements of the original array and then the given
[element].

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline
operator fun UShortArray.plus(element: UShort): UShortArray {
    return UShortArray(storage +
        element.toShort())

Returns an array containing all elements of the original array and then all elements
of the given [elements] collection.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public operator
fun UIntArray.plus(elements: Collection<UInt>): UIntArray {
    var index = size
    val result =
        storage.copyOf(size + elements.size)
    for (element in elements) result[index++] = element.toInt()
    return
        UIntArray(result)

Returns an array containing all elements of the original array and then all elements
of the given [elements] collection.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public operator
fun ULongArray.plus(elements: Collection<ULong>): ULongArray {
    var index = size
    val result =
        storage.copyOf(size + elements.size)
    for (element in elements) result[index++] = element.toLong()
    return
        ULongArray(result)

Returns an array containing all elements of the original array and then all
elements of the given [elements] collection.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public
operator fun UByteArray.plus(elements: Collection<UByte>): UByteArray {
    var index = size
    val result =
        storage.copyOf(size + elements.size)
    for (element in elements) result[index++] = element.toByte()
    return
        UByteArray(result)

Returns an array containing all elements of the original array and then all elements
of the given [elements] collection.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
public operator
fun UShortArray.plus(elements: Collection<UShort>): UShortArray {
    var index = size
    val result =
        storage.copyOf(size + elements.size)
    for (element in elements) result[index++] = element.toShort()
    return
        UShortArray(result)

Returns an array containing all elements of the original array and then all
elements of the given [elements] array.

@SinceKotlin("1.3")@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline operator fun

```



```

*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sort(fromIndex: Int = 0,
toIndex: Int = size): Unit {\n    AbstractList.checkRangeIndexes(fromIndex, toIndex, size)\n    sortArray(this,
fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of the array in the specified range in-place.\n * The elements are
sorted descending according to their natural sort order.\n * \n * @param fromIndex the start of the range (inclusive)
to sort.\n * @param toIndex the end of the range (exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException
if [fromIndex] is less than zero or [toIndex] is greater than the size of this array.\n * @throws
IllegalArgumentOutOfRangeException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.sortDescending(fromIndex: Int,
toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements of
the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort
order.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range
(exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.sortDescending(fromIndex:
Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements
of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort
order.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range
(exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.sortDescending(fromIndex:
Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Sorts elements
of the array in the specified range in-place.\n * The elements are sorted descending according to their natural sort
order.\n * \n * @param fromIndex the start of the range (inclusive) to sort.\n * @param toIndex the end of the range
(exclusive) to sort.\n * \n * @throws IndexOutOfBoundsException if [fromIndex] is less than zero or [toIndex] is
greater than the size of this array.\n * @throws IllegalArgumentException if [fromIndex] is greater than [toIndex].\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.sortDescending(fromIndex:
Int, toIndex: Int): Unit {\n    sort(fromIndex, toIndex)\n    reverse(fromIndex, toIndex)\n}\n\n/**\n * Returns an
array of type [ByteArray], which is a copy of this array where each element is a signed reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.toByteArray(): ByteArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns an array of type
[IntArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding
element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.toIntArray(): IntArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns an array of type [LongArray],
which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding element of this
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.toLongArray(): LongArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns an array of type
[ShortArray], which is a copy of this array where each element is a signed reinterpretation\n * of the corresponding
element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.toShortArray(): ShortArray {\n    return storage.copyOf()\n}\n\n/**\n * Returns a *typed* object array
containing all of the elements of this primitive array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.toTypedArray(): Array<UInt>
{\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array containing all of the
elements of this primitive array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.toTypedArray(): Array<ULong> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n *
Returns a *typed* object array containing all of the elements of this primitive array.\n

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```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.toTypedArray():
Array<UByte> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns a *typed* object array
containing all of the elements of this primitive array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.toTypedArray():
Array<UShort> {\n    return Array(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of UByte containing
all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
Array<out UByte>.toUByteArray(): UByteArray {\n    return UByteArray(size) { index -> this[index] }\n}\n\n/**\n
 * Returns an array of type [UByteArray], which is a copy of this array where each element is an unsigned
reinterpretation\n * of the corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ByteArray.toUByteArray(): UByteArray {\n    return UByteArray(this.copyOf())\n}\n\n/**\n * Returns an array of
UInt containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out UInt>.toUIntArray(): UIntArray
{\n    return UIntArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type [UIntArray], which is a
copy of this array where each element is an unsigned reinterpretation\n * of the corresponding element of this
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
IntArray.toUIntArray(): UIntArray {\n    return UIntArray(this.copyOf())\n}\n\n/**\n * Returns an array of ULong
containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out ULong>.toULongArray():
ULongArray {\n    return ULongArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type
[ULongArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
LongArray.toULongArray(): ULongArray {\n    return ULongArray(this.copyOf())\n}\n\n/**\n * Returns an array
of UShort containing all of the elements of this generic array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Array<out UShort>.toUShortArray():
UShortArray {\n    return UShortArray(size) { index -> this[index] }\n}\n\n/**\n * Returns an array of type
[UShortArray], which is a copy of this array where each element is an unsigned reinterpretation\n * of the
corresponding element of this array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ShortArray.toUShortArray(): UShortArray {\n    return UShortArray(this.copyOf())\n}\n\n/**\n * Returns a [Map]
where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to
each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The returned map
preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UIntArray.associateWith(valueSelector: (UInt) -> V): Map<UInt, V> {\n    val result = LinkedHashMap<UInt,
V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result, valueSelector)\n}\n\n/**\n * Returns a
[Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function
applied to each element.\n * \n * If any two elements are equal, the last one gets added to the map.\n * \n * The
returned map preserves the entry iteration order of the original array.\n * \n * @sample
samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
ULongArray.associateWith(valueSelector: (ULong) -> V): Map<ULong, V> {\n    val result =
LinkedHashMap<ULong, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,
valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n *
produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one
gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n *

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@sample samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>\nUByteArray.associateWith(valueSelector: (UByte) -> V): Map<UByte, V> {\n    val result =\n    LinkedHashMap<UByte, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,\n    valueSelector)\n}\n\n/**\n * Returns a [Map] where keys are elements from the given array and values are\n * produced by the [valueSelector] function applied to each element.\n * \n * If any two elements are equal, the last one\n * gets added to the map.\n * \n * The returned map preserves the entry iteration order of the original array.\n * \n * @sample samples.collections.Collections.Transformations.associateWith\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>\nUShortArray.associateWith(valueSelector: (UShort) -> V): Map<UShort, V> {\n    val result =\n    LinkedHashMap<UShort, V>(mapCapacity(size).coerceAtLeast(16))\n    return associateWithTo(result,\n    valueSelector)\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each\n * element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function\n * applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in UInt, in V>> UIntArray.associateWithTo(destination: M, valueSelector: (UInt) -> V): M {\n    for\n    (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample\n    samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in ULong, in V>> ULongArray.associateWithTo(destination: M, valueSelector: (ULong) -> V): M {\n    for\n    (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return\n    destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element\n * of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied\n * to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample\n    samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in UByte, in V>> UByteArray.associateWithTo(destination: M, valueSelector: (UByte) -> V): M {\n    for\n    (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return\n    destination\n}\n\n/**\n * Populates and returns the [destination] mutable map with key-value pairs for each element\n * of the given array,\n * where key is the element itself and value is provided by the [valueSelector] function applied\n * to that key.\n * \n * If any two elements are equal, the last one overwrites the former value in the map.\n * \n * @sample\n    samples.collections.Collections.Transformations.associateWithTo\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V, M : MutableMap<in UShort, in V>> UShortArray.associateWithTo(destination: M, valueSelector: (UShort) -> V): M {\n    for\n    (element in this) {\n        destination.put(element, valueSelector(element))\n    }\n    return\n    destination\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being\n * invoked on each element of original array.\n * \n * @sample\n    samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUIntArray.flatMap(transform: (UInt) -> Iterable<R>): List<R> {\n    return flatMapTo(ArrayList<R>(),\n    transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being\n * invoked on each element of original array.\n * \n * @sample\n    samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>

```

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ULongArray.flatMap(transform: (ULong) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.flatMap(transform: (UByte) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element of original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMap\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.flatMap(transform: (UShort) -> Iterable<R>): List<R> {\n  return flatMapTo(ArrayList<R>(),
transform)\n}\n\n/**\n * Returns a single list of all elements yielded from results of [transform] function being
invoked on each element\n * and its index in the original array.\n * \n * @sample
samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.flatMapIndexed(transform: (index: Int, UInt) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.flatMapIndexed(transform: (index: Int, ULong) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.flatMapIndexed(transform: (index: Int, UByte) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Returns a single list of all elements yielded from
results of [transform] function being invoked on each element\n * and its index in the original array.\n * \n *
@sample samples.collections.Collections.Transformations.flatMapIndexed\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.flatMapIndexed(transform: (index: Int, UShort) -> Iterable<R>): List<R> {\n  return
flatMapIndexedTo(ArrayList<R>(), transform)\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> UIntArray.flatMapIndexedTo(destination: C, transform: (index: Int, UInt) ->
Iterable<R>): C {\n  var index = 0\n  for (element in this) {\n    val list = transform(index++, element)\n
destination.addAll(list)\n  }\n  return destination\n}\n\n/**\n * Appends all elements yielded from results of
[transform] function being invoked on each element\n * and its index in the original array, to the given
[destination].\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :
MutableCollection<in R>> ULongArray.flatMapIndexedTo(destination: C, transform: (index: Int, ULong) ->

```

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Iterable<R>): C {
    var index = 0
    for (element in this) {
        val list = transform(index++, element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element and its index in the original array, to the given [destination].

* Since Kotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> UByteArray.flatMapIndexedTo(destination: C, transform: (index: Int, UByte) -> Iterable<R>): C {
    var index = 0
    for (element in this) {
        val list = transform(index++, element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element and its index in the original array, to the given [destination].

* Since Kotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolutionByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> UShortArray.flatMapIndexedTo(destination: C, transform: (index: Int, UShort) -> Iterable<R>): C {
    var index = 0
    for (element in this) {
        val list = transform(index++, element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> UIntArray.flatMapTo(destination: C, transform: (UInt) -> Iterable<R>): C {
    for (element in this) {
        val list = transform(element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> ULongArray.flatMapTo(destination: C, transform: (ULong) -> Iterable<R>): C {
    for (element in this) {
        val list = transform(element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> UByteArray.flatMapTo(destination: C, transform: (UByte) -> Iterable<R>): C {
    for (element in this) {
        val list = transform(element)
        destination.addAll(list)
    }
    return destination
}
Append all elements yielded from results of [transform] function being invoked on each element of original array, to the given [destination].

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R, C : MutableCollection<in R>> UShortArray.flatMapTo(destination: C, transform: (UShort) -> Iterable<R>): C {
    for (element in this) {
        val list = transform(element)
        destination.addAll(list)
    }
    return destination
}
Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and returns a map where each group key is associated with a list of corresponding elements.
The returned map preserves the entry iteration order of the keys produced from the original array.
@sample samples.collections.Collections.Transformations.groupBy

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <K> UIntArray.groupBy(keySelector: (UInt) -> K): Map<K, List<UInt>> {
    return groupByTo(LinkedHashMap<K, MutableList<UInt>>(), keySelector)
}
Groups elements of the original array by the key returned by the given [keySelector] function applied to each element and returns a map where each group key is associated with a list of corresponding elements.
The returned map preserves the entry iteration order of the keys produced from the original array.
@sample samples.collections.Collections.Transformations.groupBy

* Since Kotlin("1.3")
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <K> ULongArray.groupBy(keySelector: (ULong) -> K): Map<K, List<ULong>> {
    return groupByTo(LinkedHashMap<K, MutableList<ULong>>(), keySelector)
}
Groups elements of the

```

original array by the key returned by the given [keySelector] function  
\* applied to each element and returns a map where each group key is associated with a list of corresponding elements.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupBy\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>\nUByteArray.groupBy(keySelector: (UByte) -> K): Map<K, List<UByte>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<UByte>>(), keySelector)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function  
\* applied to each element and returns a map where each group key is associated with a list of corresponding elements.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupBy\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K>\nUShortArray.groupBy(keySelector: (UShort) -> K): Map<K, List<UShort>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<UShort>>(), keySelector)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array  
\* by the key returned by the given [keySelector] function applied to the element  
\* and returns a map where each group key is associated with a list of corresponding values.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>\nUIntArray.groupBy(keySelector: (UInt) -> K, valueTransform: (UInt) -> V): Map<K, List<V>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array  
\* by the key returned by the given [keySelector] function applied to the element  
\* and returns a map where each group key is associated with a list of corresponding values.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>\nULongArray.groupBy(keySelector: (ULong) -> K, valueTransform: (ULong) -> V): Map<K, List<V>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array  
\* by the key returned by the given [keySelector] function applied to the element  
\* and returns a map where each group key is associated with a list of corresponding values.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>\nUByteArray.groupBy(keySelector: (UByte) -> K, valueTransform: (UByte) -> V): Map<K, List<V>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups values returned by the [valueTransform] function applied to each element of the original array  
\* by the key returned by the given [keySelector] function applied to the element  
\* and returns a map where each group key is associated with a list of corresponding values.  
\* \n \* The returned map preserves the entry iteration order of the keys produced from the original array.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupByKeysAndValues\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <K, V>\nUShortArray.groupBy(keySelector: (UShort) -> K, valueTransform: (UShort) -> V): Map<K, List<V>> {\n return
```

groupByTo(LinkedHashMap<K, MutableList<V>>(), keySelector, valueTransform)\n}\n\n/\*\*\n \* Groups elements of the original array by the key returned by the given [keySelector] function  
\* applied to each element and puts to the [destination] map each group key associated with a list of corresponding elements.  
\* \n \* @return The [destination] map.  
\* \n \* @sample

samples.collections.Collections.Transformations.groupBy\n

```

*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, M :
MutableMap<in K, MutableList<UInt>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K): M {n
for (element in this) {n    val key = keySelector(element)n    val list = destination.getOrPut(key) {
ArrayList<UInt>() }n    list.add(element)n }n return destinationn}n\/n**n * Groups elements of the
original array by the key returned by the given [keySelector] functionn * applied to each element and puts to the
[destination] map each group key associated with a list of corresponding elements.n * n * @return The
[destination] map.n * n * @sample samples.collections.Collections.Transformations.groupBy\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, M :
MutableMap<in K, MutableList<ULong>>> ULongArray.groupByTo(destination: M, keySelector: (ULong) -> K):
M {n for (element in this) {n    val key = keySelector(element)n    val list = destination.getOrPut(key) {
ArrayList<ULong>() }n    list.add(element)n }n return destinationn}n\/n**n * Groups elements of the
original array by the key returned by the given [keySelector] functionn * applied to each element and puts to the
[destination] map each group key associated with a list of corresponding elements.n * n * @return The
[destination] map.n * n * @sample samples.collections.Collections.Transformations.groupBy\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, M :
MutableMap<in K, MutableList<UByte>>> UByteArray.groupByTo(destination: M, keySelector: (UByte) -> K):
M {n for (element in this) {n    val key = keySelector(element)n    val list = destination.getOrPut(key) {
ArrayList<UByte>() }n    list.add(element)n }n return destinationn}n\/n**n * Groups elements of the
original array by the key returned by the given [keySelector] functionn * applied to each element and puts to the
[destination] map each group key associated with a list of corresponding elements.n * n * @return The
[destination] map.n * n * @sample samples.collections.Collections.Transformations.groupBy\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, M :
MutableMap<in K, MutableList<UShort>>> UShortArray.groupByTo(destination: M, keySelector: (UShort) -> K):
M {n for (element in this) {n    val key = keySelector(element)n    val list = destination.getOrPut(key) {
ArrayList<UShort>() }n    list.add(element)n }n return destinationn}n\/n**n * Groups values returned by
the [valueTransform] function applied to each element of the original arrayn * by the key returned by the given
[keySelector] function applied to the elementn * and puts to the [destination] map each group key associated with a
list of corresponding values.n * n * @return The [destination] map.n * n * @sample
samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> UIntArray.groupByTo(destination: M, keySelector: (UInt) -> K,
valueTransform: (UInt) -> V): M {n for (element in this) {n    val key = keySelector(element)n    val list =
destination.getOrPut(key) { ArrayList<V>() }n    list.add(valueTransform(element))n }n return
destinationn}n\/n**n * Groups values returned by the [valueTransform] function applied to each element of the
original arrayn * by the key returned by the given [keySelector] function applied to the elementn * and puts to the
[destination] map each group key associated with a list of corresponding values.n * n * @return The [destination]
map.n * n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> ULongArray.groupByTo(destination: M, keySelector: (ULong) -> K,
valueTransform: (ULong) -> V): M {n for (element in this) {n    val key = keySelector(element)n    val list
= destination.getOrPut(key) { ArrayList<V>() }n    list.add(valueTransform(element))n }n return
destinationn}n\/n**n * Groups values returned by the [valueTransform] function applied to each element of the
original arrayn * by the key returned by the given [keySelector] function applied to the elementn * and puts to the
[destination] map each group key associated with a list of corresponding values.n * n * @return The [destination]
map.n * n * @sample samples.collections.Collections.Transformations.groupByKeysAndValues\n
*\/n@SinceKotlin("1.3\/")n@ExperimentalUnsignedTypesn@kotlin.internal.InlineOnlynpublic inline fun <K, V,
M : MutableMap<in K, MutableList<V>>> UByteArray.groupByTo(destination: M, keySelector: (UByte) -> K,
valueTransform: (UByte) -> V): M {n for (element in this) {n    val key = keySelector(element)n    val list

```



transform applied to the element.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UIntArray.mapIndexedTo(destination: C, transform: (index: Int, UInt) -> R): C {\n    var index = 0\n    for (item in this)\n        destination.add(transform(index++, item))\n    return destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an element and the element  
itself\n * and returns the result of the transform applied to the element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> ULongArray.mapIndexedTo(destination: C, transform: (index: Int, ULong) -> R): C {\n    var index = 0\n    for (item in this)\n        destination.add(transform(index++, item))\n    return  
destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an  
element and the element itself\n * and returns the result of the transform applied to the element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UByteArray.mapIndexedTo(destination: C, transform: (index: Int, UByte) -> R): C {\n    var index = 0\n    for (item in this)\n        destination.add(transform(index++, item))\n    return  
destination\n}\n\n/**\n * Applies the given [transform] function to each element and its index in the original array\n * and appends the results to the given [destination].\n * @param [transform] function that takes the index of an  
element and the element itself\n * and returns the result of the transform applied to the element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UShortArray.mapIndexedTo(destination: C, transform: (index: Int, UShort) -> R): C {\n    var index = 0\n    for (item in this)\n        destination.add(transform(index++, item))\n    return  
destination\n}\n\n/**\n * Applies the given [transform] function to each element of the original array\n * and appends the results to the given [destination].\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UIntArray.mapTo(destination: C, transform: (UInt) -> R): C {\n    for (item in this)\n        destination.add(transform(item))\n    return destination\n}\n\n/**\n * Applies the given [transform] function to each  
element of the original array\n * and appends the results to the given [destination].\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> ULongArray.mapTo(destination: C, transform: (ULong) -> R): C {\n    for (item in  
this)\n        destination.add(transform(item))\n    return destination\n}\n\n/**\n * Applies the given [transform]  
function to each element of the original array\n * and appends the results to the given [destination].\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UByteArray.mapTo(destination: C, transform: (UByte) -> R): C {\n    for (item in this)\n        destination.add(transform(item))\n    return destination\n}\n\n/**\n * Applies the given [transform] function to  
each element of the original array\n * and appends the results to the given [destination].\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, C :  
MutableCollection<in R>> UShortArray.mapTo(destination: C, transform: (UShort) -> R): C {\n    for (item in  
this)\n        destination.add(transform(item))\n    return destination\n}\n\n/**\n * Returns a lazy [Iterable] that wraps  
each element of the original array\n * into an [IndexedValue] containing the index of that element and the element  
itself.\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun UIntArray.withIndex():  
Iterable<IndexedValue<UInt>> {\n    return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]  
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and the  
element itself.\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun ULongArray.withIndex():  
Iterable<IndexedValue<ULong>> {\n    return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]  
that wraps each element of the original array\n * into an [IndexedValue] containing the index of that element and the  
element itself.\n * @SinceKotlin("1.3")\n * @ExperimentalUnsignedTypes\n * public fun UByteArray.withIndex():  
Iterable<IndexedValue<UByte>> {\n    return IndexingIterable { iterator() }\n}\n\n/**\n * Returns a lazy [Iterable]
```

that wraps each element of the original array into an [IndexedValue] containing the index of that element and the element itself.

```

*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/npublic fun UShortArray.withIndex():
Iterable<IndexedValue<UShort>> {\/n    return IndexingIterable { iterator() }\/n}\/n\/n**\/n * Returns `true` if all
elements match the given [predicate].\/n *\/n * @sample samples.collections.Collections.Aggregates.all\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UIntArray.all(predicate: (UInt) -> Boolean): Boolean {\/n    for (element in this) if (!predicate(element)) return
false\/n    return true\/n}\/n}\/n**\/n * Returns `true` if all elements match the given [predicate].\/n *\/n * @sample
samples.collections.Collections.Aggregates.all\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
ULongArray.all(predicate: (ULong) -> Boolean): Boolean {\/n    for (element in this) if (!predicate(element)) return
false\/n    return true\/n}\/n}\/n**\/n * Returns `true` if all elements match the given [predicate].\/n *\/n * @sample
samples.collections.Collections.Aggregates.all\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UByteArray.all(predicate: (UByte) -> Boolean): Boolean {\/n    for (element in this) if (!predicate(element)) return
false\/n    return true\/n}\/n}\/n**\/n * Returns `true` if all elements match the given [predicate].\/n *\/n * @sample
samples.collections.Collections.Aggregates.all\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UShortArray.all(predicate: (UShort) -> Boolean): Boolean {\/n    for (element in this) if (!predicate(element)) return
false\/n    return true\/n}\/n}\/n**\/n * Returns `true` if array has at least one element.\/n *\/n * @sample
samples.collections.Collections.Aggregates.any\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UIntArray.any(): Boolean {\/n    return storage.any()\/n}\/n}\/n**\/n * Returns `true` if array has at least one element.\/n
*\/n * @sample samples.collections.Collections.Aggregates.any\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
ULongArray.any(): Boolean {\/n    return storage.any()\/n}\/n}\/n**\/n * Returns `true` if array has at least one
element.\/n *\/n * @sample samples.collections.Collections.Aggregates.any\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UByteArray.any(): Boolean {\/n    return storage.any()\/n}\/n}\/n**\/n * Returns `true` if array has at least one
element.\/n *\/n * @sample samples.collections.Collections.Aggregates.any\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UShortArray.any(): Boolean {\/n    return storage.any()\/n}\/n}\/n**\/n * Returns `true` if at least one element matches
the given [predicate].\/n *\/n * @sample samples.collections.Collections.Aggregates.anyWithPredicate\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UIntArray.any(predicate: (UInt) -> Boolean): Boolean {\/n    for (element in this) if (predicate(element)) return true\/n
    return false\/n}\/n}\/n**\/n * Returns `true` if at least one element matches the given [predicate].\/n *\/n * @sample
samples.collections.Collections.Aggregates.anyWithPredicate\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
ULongArray.any(predicate: (ULong) -> Boolean): Boolean {\/n    for (element in this) if (predicate(element)) return
true\/n    return false\/n}\/n}\/n**\/n * Returns `true` if at least one element matches the given [predicate].\/n *\/n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UByteArray.any(predicate: (UByte) -> Boolean): Boolean {\/n    for (element in this) if (predicate(element)) return
true\/n    return false\/n}\/n}\/n**\/n * Returns `true` if at least one element matches the given [predicate].\/n *\/n *
@sample samples.collections.Collections.Aggregates.anyWithPredicate\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun
UShortArray.any(predicate: (UShort) -> Boolean): Boolean {\/n    for (element in this) if (predicate(element)) return
true\/n    return false\/n}\/n}\/n**\/n * Returns the number of elements matching the given [predicate].\/n
*\/n@SinceKotlin("1.3")\/n@ExperimentalUnsignedTypes\/n@kotlin.internal.InlineOnly\/npublic inline fun

```

```

UIntArray.count(predicate: (UInt) -> Boolean): Int { \n  var count = 0 \n  for (element in this) if
(predicate(element)) ++count \n  return count \n} \n \n /** \n * Returns the number of elements matching the given
[predicate]. \n * \n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public
inline fun ULongArray.count(predicate: (ULong) -> Boolean): Int { \n  var count = 0 \n  for (element in this) if
(predicate(element)) ++count \n  return count \n} \n \n /** \n * Returns the number of elements matching the given
[predicate]. \n * \n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public
inline fun UByteArray.count(predicate: (UByte) -> Boolean): Int { \n  var count = 0 \n  for (element in this) if
(predicate(element)) ++count \n  return count \n} \n \n /** \n * Returns the number of elements matching the given
[predicate]. \n * \n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public
inline fun UShortArray.count(predicate: (UShort) -> Boolean): Int { \n  var count = 0 \n  for (element in this) if
(predicate(element)) ++count \n  return count \n} \n \n /** \n * Accumulates value starting with [initial] value and
applying [operation] from left to right \n * to current accumulator value and each element. \n * \n * Returns the
specified [initial] value if the array is empty. \n * \n * @param [operation] function that takes current accumulator
value and an element, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
UIntArray.fold(initial: R, operation: (acc: R, UInt) -> R): R { \n  var accumulator = initial \n  for (element in this)
accumulator = operation(accumulator, element) \n  return accumulator \n} \n \n /** \n * Accumulates value starting
with [initial] value and applying [operation] from left to right \n * to current accumulator value and each element. \n *
Returns the specified [initial] value if the array is empty. \n * \n * @param [operation] function that takes
current accumulator value and an element, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
ULongArray.fold(initial: R, operation: (acc: R, ULong) -> R): R { \n  var accumulator = initial \n  for (element in
this) accumulator = operation(accumulator, element) \n  return accumulator \n} \n \n /** \n * Accumulates value
starting with [initial] value and applying [operation] from left to right \n * to current accumulator value and each
element. \n * \n * Returns the specified [initial] value if the array is empty. \n * \n * @param [operation] function that
takes current accumulator value and an element, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
UByteArray.fold(initial: R, operation: (acc: R, UByte) -> R): R { \n  var accumulator = initial \n  for (element in
this) accumulator = operation(accumulator, element) \n  return accumulator \n} \n \n /** \n * Accumulates value
starting with [initial] value and applying [operation] from left to right \n * to current accumulator value and each
element. \n * \n * Returns the specified [initial] value if the array is empty. \n * \n * @param [operation] function that
takes current accumulator value and an element, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
UShortArray.fold(initial: R, operation: (acc: R, UShort) -> R): R { \n  var accumulator = initial \n  for (element in
this) accumulator = operation(accumulator, element) \n  return accumulator \n} \n \n /** \n * Accumulates value
starting with [initial] value and applying [operation] from left to right \n * to current accumulator value and each
element with its index in the original array. \n * \n * Returns the specified [initial] value if the array is empty. \n *
\n * @param [operation] function that takes the index of an element, current accumulator value \n * and the element
itself, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
UIntArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): R { \n  var index = 0 \n  var
accumulator = initial \n  for (element in this) accumulator = operation(index++, accumulator, element) \n  return
accumulator \n} \n \n /** \n * Accumulates value starting with [initial] value and applying [operation] from left to
right \n * to current accumulator value and each element with its index in the original array. \n * \n * Returns the
specified [initial] value if the array is empty. \n * \n * @param [operation] function that takes the index of an
element, current accumulator value \n * and the element itself, and calculates the next accumulator value. \n
*\n * @SinceKotlin("1.3") \n * @ExperimentalUnsignedTypes \n * @kotlin.internal.InlineOnly \n * public inline fun <R>
ULongArray.foldIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): R { \n  var index = 0 \n  var

```

```

accumulator = initial\n  for (element in this) accumulator = operation(index++, accumulator, element)\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UByte) -> R): R {\n  var index = 0\n  var
accumulator = initial\n  for (element in this) accumulator = operation(index++, accumulator, element)\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.foldIndexed(initial: R, operation: (index: Int, acc: R, UShort) -> R): R {\n  var index = 0\n  var
accumulator = initial\n  for (element in this) accumulator = operation(index++, accumulator, element)\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the
next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.foldRight(initial: R, operation: (UInt, acc: R) -> R): R {\n  var index = lastIndex\n  var accumulator =
initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return
accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the
next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.foldRight(initial: R, operation: (ULong, acc: R) -> R): R {\n  var index = lastIndex\n  var
accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n
return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right
to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the
next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.foldRight(initial: R, operation: (UByte, acc: R) -> R): R {\n  var index = lastIndex\n  var
accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n
return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right
to left\n * to each element and current accumulator value.\n * \n * Returns the specified [initial] value if the array is
empty.\n * \n * @param [operation] function that takes an element and current accumulator value, and calculates the
next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.foldRight(initial: R, operation: (UShort, acc: R) -> R): R {\n  var index = lastIndex\n  var
accumulator = initial\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n
return accumulator\n}\n\n/**\n * Accumulates value starting with [initial] value and applying [operation] from right
to left\n * to each element with its index in the original array and current accumulator value.\n * \n * Returns the
specified [initial] value if the array is empty.\n * \n * @param [operation] function that takes the index of an
element, the element itself\n * and current accumulator value, and calculates the next accumulator value.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>

```

```

UIntArray.foldRightIndexed(initial: R, operation: (index: Int, UInt, acc: R) -> R): R {
    var index = lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index), accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun <R> ULongArray.foldRightIndexed(initial: R, operation: (index: Int, ULong, acc: R) -> R): R {
    var index =
    lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index),
        accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun <R>
UByteArray.foldRightIndexed(initial: R, operation: (index: Int, UByte, acc: R) -> R): R {
    var index =
    lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index),
        accumulator)
        --index
    }
    return accumulator
}

```

Accumulates value starting with [initial] value and applying [operation] from right to left to each element with its index in the original array and current accumulator value.

Returns the specified [initial] value if the array is empty.

@param [operation] function that takes the index of an element, the element itself and current accumulator value, and calculates the next accumulator value.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun <R>
UShortArray.foldRightIndexed(initial: R, operation: (index: Int, UShort, acc: R) -> R): R {
    var index =
    lastIndex
    var accumulator = initial
    while (index >= 0) {
        accumulator = operation(index, get(index),
        accumulator)
        --index
    }
    return accumulator
}

```

Performs the given [action] on each element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
UIntArray.forEach(action: (UInt) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
ULongArray.forEach(action: (ULong) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
UByteArray.forEach(action: (UByte) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
UShortArray.forEach(action: (UShort) -> Unit): Unit {
    for (element in this) action(element)
}

```

Performs the given [action] on each element, providing sequential index with the element.

@param [action] function that takes the index of an element and the element itself and performs the action on the element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
UIntArray.forEachIndexed(action: (index: Int, UInt) -> Unit): Unit {
    var index = 0
    for (item in this)
    action(index++, item)
}

```

Performs the given [action] on each element, providing sequential index with the element.

@param [action] function that takes the index of an element and the element itself and performs the action on the element.

```

@SinceKotlin("1.3")@ExperimentalUnsignedTypes@kotlin.internal.InlineOnly
public inline fun
ULongArray.forEachIndexed(action: (index: Int, ULong) -> Unit): Unit {
    var index = 0
    for (item in this)
    action(index++, item)
}

```

Performs the given [action] on each element, providing sequential index with the element.

@param [action] function that takes the index of an element and the element itself and performs

the action on the element.\n

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.forEachIndexed(action: (index: Int, UByte) -> Unit): Unit {\n    var index = 0\n    for (item in this)  
    action(index++, item)\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with  
the element.\n * @param [action] function that takes the index of an element and the element itself\n * and performs  
the action on the element.\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.forEachIndexed(action: (index: Int, UShort) -> Unit): Unit {\n    var index = 0\n    for (item in this)  
    action(index++, item)\n}\n\n@Deprecated("Use maxOrNull instead.",  
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",  
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.max():  
UInt? {\n    return maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",  
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",  
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.max():  
ULong? {\n    return maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",  
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",  
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.max():  
UByte? {\n    return maxOrNull()\n}\n\n@Deprecated("Use maxOrNull instead.",  
ReplaceWith("this.maxOrNull()"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",  
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.max():  
UShort? {\n    return maxOrNull()\n}\n\n@Deprecated("Use maxByOrNull instead.",  
ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =  
"1.5", hiddenSince =  
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
<R : Comparable<R>> UIntArray.maxBy(selector: (UInt) -> R): UInt? {\n    return  
    maxByOrNull(selector)\n}\n\n@Deprecated("Use maxByOrNull instead.",  
ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =  
"1.5", hiddenSince =  
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
<R : Comparable<R>> ULongArray.maxBy(selector: (ULong) -> R): ULong? {\n    return  
    maxByOrNull(selector)\n}\n\n@Deprecated("Use maxByOrNull instead.",  
ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =  
"1.5", hiddenSince =  
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
<R : Comparable<R>> UByteArray.maxBy(selector: (UByte) -> R): UByte? {\n    return  
    maxByOrNull(selector)\n}\n\n@Deprecated("Use maxByOrNull instead.",  
ReplaceWith("this.maxByOrNull(selector)"))\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =  
"1.5", hiddenSince =  
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
<R : Comparable<R>> UShortArray.maxBy(selector: (UShort) -> R): UShort? {\n    return  
    maxByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the largest value of the given function or  
`null` if there are no elements.\n * @sample samples.collections.Collections.Aggregates.maxByOrNull\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :  
Comparable<R>> UIntArray.maxByOrNull(selector: (UInt) -> R): UInt? {\n    if (isEmpty()) return null\n    var  
    maxElem = this[0]\n    val lastIndex = this.lastIndex\n    if (lastIndex == 0) return maxElem\n    var maxValue =  
    selector(maxElem)\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        val v = selector(e)\n        if (maxValue < v)  
        {\n            maxElem = e\n            maxValue = v\n        }\n    }\n    return maxElem\n}\n\n/**\n * Returns the first  
element yielding the largest value of the given function or `null` if there are no elements.\n * @sample
```

```

samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.maxByOrNull(selector: (ULong) -> R): ULong? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.maxByOrNull(selector: (UByte) -> R): UByte? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the first
element yielding the largest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.maxByOrNull
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.maxByOrNull(selector: (UShort) -> R): UShort? {\n  if (isEmpty()) return null\n
var maxElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return maxElem\n  var maxValue =
selector(maxElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (maxValue < v)
{\n      maxElem = e\n      maxValue = v\n    }\n  }\n  return maxElem\n}\n\n/**\n * Returns the largest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.maxOf(selector: (UInt) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.maxOf(selector: (ULong) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.maxOf(selector: (UByte) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    maxValue =
maxOf(maxValue, v)\n  }\n  return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOf(selector: (UShort) -> Double): Double {\n  if (isEmpty()) throw
NoSuchElementException()\n  var maxValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =

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selector(this[i])\n    maxValue = maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the
largest value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If
any of values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.maxOf(selector: (UInt) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.maxOf(selector: (ULong) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.maxOf(selector: (UByte) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n    var
maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOf(selector: (UShort) -> Float): Float {\n    if (isEmpty()) throw NoSuchElementException()\n
var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        maxValue =
maxOf(maxValue, v)\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * @throws NoSuchElementException if the
array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.maxOf(selector: (UInt) -> R): R {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.maxOf(selector: (ULong) -> R): R {\n    if (isEmpty()) throw
NoSuchElementException()\n    var maxValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =
selector(this[i])\n        if (maxValue < v) {\n            maxValue = v\n        }\n    }\n    return maxValue\n}\n\n/**\n * Returns the largest value among all values produced by [selector] function\n * applied to each element in the
array.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :

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Comparable<R>> UByteArray.maxOf(selector: (UByte) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (maxValue < v) {
            maxValue = v
        }
    }
    return maxValue
}

Returns the largest value among all values produced by [selector] function
* applied to each element in the array.
* @throws NoSuchElementException if the array is empty.

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolutionByLambdaReturnType
* ExperimentalUnsignedTypes
* kotlin.internal.InlineOnly
public inline fun <R : Comparable<R>> UShortArray.maxOf(selector: (UShort) -> R): R {
    if (isEmpty()) throw NoSuchElementException()
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        if (maxValue < v) {
            maxValue = v
        }
    }
    return maxValue
}

Returns the largest value among all values produced by [selector] function
* applied to each element in the array
or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolutionByLambdaReturnType
* ExperimentalUnsignedTypes
* kotlin.internal.InlineOnly
public inline fun UIntArray.maxOfOrNull(selector: (UInt) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}

Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolutionByLambdaReturnType
* ExperimentalUnsignedTypes
* kotlin.internal.InlineOnly
public inline fun ULongArray.maxOfOrNull(selector: (ULong) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}

Returns the largest value among all values produced
by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.

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* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
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* kotlin.internal.InlineOnly
public inline fun UByteArray.maxOfOrNull(selector: (UByte) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
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Returns the largest value among all values produced by [selector]
function
* applied to each element in the array or `null` if there are no elements.
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* OverloadResolutionByLambdaReturnType
* ExperimentalUnsignedTypes
* kotlin.internal.InlineOnly
public inline fun UShortArray.maxOfOrNull(selector: (UShort) -> Double): Double? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
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Returns the largest value among all values produced
by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.

* Since Kotlin("1.4")
* OptIn(kotlin.experimental.ExperimentalTypeInference::class)
* OverloadResolutionByLambdaReturnType
* ExperimentalUnsignedTypes
* kotlin.internal.InlineOnly
public inline fun UIntArray.maxOfOrNull(selector: (UInt) -> Float): Float? {
    if (isEmpty()) return null
    var maxValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        maxValue = maxOf(maxValue, v)
    }
    return maxValue
}

Returns the largest value among all values produced by [selector] function
* applied to each element in the array or `null` if there are no elements.
* If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.

```

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.maxOfOrNull(selector: (ULong) -> Float): Float? {\n if (isEmpty()) return null\n var maxValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n
}\n return maxValue\n}\n\n**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
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selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n
}\n return maxValue\n}\n\n**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.maxOfOrNull(selector: (UShort) -> Float): Float? {\n if (isEmpty()) return null\n var maxValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n maxValue = maxOf(maxValue, v)\n
}\n return maxValue\n}\n\n**\n * Returns the largest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.maxOfOrNull(selector: (UInt) -> R): R? {\n if (isEmpty()) return null\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n

```

```

*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
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Comparable<R>> ULongArray.maxOfOrNull(selector: (ULong) -> R): R? {\n if (isEmpty()) return null\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.maxOfOrNull(selector: (UByte) -> R): R? {\n if (isEmpty()) return null\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n**\n * Returns the largest value among all values
produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.maxOfOrNull(selector: (UShort) -> R): R? {\n if (isEmpty()) return null\n var
maxValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if (maxValue < v) {\n
maxValue = v\n }\n }\n return maxValue\n}\n\n**\n * Returns the largest value according to the
provided [comparator]\n * among all values produced by [selector] function applied to each element in the array.\n *
\n * @throws NoSuchElementException if the array is empty.\n

```

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*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.maxOfWith(comparator: Comparator<in R>, selector: (UInt) -> R): R {\n if (isEmpty()) throw

```



```

function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.maxOfWithOrNull(comparator: Comparator<in R>, selector: (UShort) -> R): R? {\n if (isEmpty())
return null\n var max = selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n if
(comparator.compare(max, v) < 0) {\n max = v\n }\n }\n return max\n}\n\n/**\n *
Returns the largest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.maxOrNull(): UInt? {\n if
(isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max
= e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.maxOrNull(): ULong? {\n if
(isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max
= e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.maxOrNull(): UByte? {\n if
(isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max
= e\n }\n return max\n}\n\n/**\n * Returns the largest element or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.maxOrNull(): UShort? {\n if
(isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n val e = this[i]\n if (max < e) max
= e\n }\n return max\n}\n\n@Deprecated("Use maxWithOrNull instead.")\n
ReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UIntArray.maxWith(comparator: Comparator<in UInt>): UInt? {\n return
maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\n
ReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
ULongArray.maxWith(comparator: Comparator<in ULong>): ULong? {\n return
maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\n
ReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UByteArray.maxWith(comparator: Comparator<in UByte>): UByte? {\n return
maxWithOrNull(comparator)\n}\n\n@Deprecated("Use maxWithOrNull instead.")\n
ReplaceWith("this.maxWithOrNull(comparator)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince
= "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
UShortArray.maxWith(comparator: Comparator<in UShort>): UShort? {\n return
maxWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the largest value according to the
provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.maxWithOrNull(comparator:
Comparator<in UInt>): UInt? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n
val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the
first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.maxWithOrNull(comparator:
Comparator<in ULong>): ULong? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n
val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the
first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.maxWithOrNull(comparator:
Comparator<in UByte>): UByte? {\n if (isEmpty()) return null\n var max = this[0]\n for (i in 1..lastIndex) {\n
val e = this[i]\n if (comparator.compare(max, e) < 0) max = e\n }\n return max\n}\n\n/**\n * Returns the
first element having the largest value according to the provided [comparator] or `null` if there are no elements.\n

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*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.maxWithOrNull(comparator:
Comparator<in UShort>): UShort? {\n  if (isEmpty()) return null\n  var max = this[0]\n  for (i in 1..lastIndex) {\n
    val e = this[i]\n    if (comparator.compare(max, e) < 0) max = e\n  }\n  return
max\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.min(): UInt?
{\n  return minOrNull()\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.min():
ULong? {\n  return minOrNull()\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.min():
UByte? {\n  return minOrNull()\n}\n\n@Deprecated("Use minOrNull instead."),
ReplaceWith("this.minOrNull()")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5",
hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.min():
UShort? {\n  return minOrNull()\n}\n\n@Deprecated("Use minByOrNull instead."),
ReplaceWith("this.minByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince =
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
<R : Comparable<R>> UIntArray.minBy(selector: (UInt) -> R): UInt? {\n  return
minByOrNull(selector)\n}\n\n@Deprecated("Use minByOrNull instead."),
ReplaceWith("this.minByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince =
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
<R : Comparable<R>> ULongArray.minBy(selector: (ULong) -> R): ULong? {\n  return
minByOrNull(selector)\n}\n\n@Deprecated("Use minByOrNull instead."),
ReplaceWith("this.minByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince =
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
<R : Comparable<R>> UByteArray.minBy(selector: (UByte) -> R): UByte? {\n  return
minByOrNull(selector)\n}\n\n@Deprecated("Use minByOrNull instead."),
ReplaceWith("this.minByOrNull(selector)")\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince =
"1.5", hiddenSince =
"1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
<R : Comparable<R>> UShortArray.minBy(selector: (UShort) -> R): UShort? {\n  return
minByOrNull(selector)\n}\n\n/**\n * Returns the first element yielding the smallest value of the given function or
`null` if there are no elements.\n * \n * @sample samples.collections.Collections.Aggregates.minByOrNull\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UIntArray.minByOrNull(selector: (UInt) -> R): UInt? {\n  if (isEmpty()) return null\n  var
minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)
{\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n
*\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> ULongArray.minByOrNull(selector: (ULong) -> R): ULong? {\n  if (isEmpty()) return null\n
var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)

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{\n      minElem = e\n      minValue = v\n  }\n }\n return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UByteArray.minByOrNull(selector: (UByte) -> R): UByte? {\n  if (isEmpty()) return null\n
var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)
{\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the first
element yielding the smallest value of the given function or `null` if there are no elements.\n * \n * @sample
samples.collections.Collections.Aggregates.minByOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.minByOrNull(selector: (UShort) -> R): UShort? {\n  if (isEmpty()) return null\n
var minElem = this[0]\n  val lastIndex = this.lastIndex\n  if (lastIndex == 0) return minElem\n  var minValue =
selector(minElem)\n  for (i in 1..lastIndex) {\n    val e = this[i]\n    val v = selector(e)\n    if (minValue > v)
{\n      minElem = e\n      minValue = v\n    }\n  }\n  return minElem\n}\n\n/**\n * Returns the smallest
value among all values produced by [selector] function\n * applied to each element in the array.\n * \n * If any of
values produced by [selector] function is `NaN`, the returned result is `NaN`.\n * \n * @throws
NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.minOf(selector: (UInt) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.minOf(selector: (ULong) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.minOf(selector: (UByte) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.minOf(selector: (UShort) -> Double): Double {\n  if (isEmpty()) throw NoSuchElementException()\n
var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    minValue =
minOf(minValue, v)\n  }\n  return minValue\n}\n\n/**\n * Returns the smallest value among all values produced
by [selector] function\n * applied to each element in the array.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n * \n * @throws NoSuchElementException if the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun

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UIntArray.minOf(selector: (UInt) -> Float): Float {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced
 * by [selector] function
 * applied to each element in the array.
 * If any of values produced by [selector]
 * function is `NaN`, the returned result is `NaN`.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun
ULongArray.minOf(selector: (ULong) -> Float): Float {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced
 * by [selector] function
 * applied to each element in the array.
 * If any of values produced by [selector]
 * function is `NaN`, the returned result is `NaN`.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun
UByteArray.minOf(selector: (UByte) -> Float): Float {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced
 * by [selector] function
 * applied to each element in the array.
 * If any of values produced by [selector]
 * function is `NaN`, the returned result is `NaN`.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun
UShortArray.minOf(selector: (UShort) -> Float): Float {
    if (isEmpty()) throw NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v = selector(this[i])
        minValue = minOf(minValue, v)
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced
 * by [selector] function
 * applied to each element in the array.
 * @throws NoSuchElementException if the
 * array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R :
Comparable<R>> UIntArray.minOf(selector: (UInt) -> R): R {
    if (isEmpty()) throw
    NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v =
        selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced by [selector] function
 * applied to each element in the
 * array.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R :
Comparable<R>> ULongArray.minOf(selector: (ULong) -> R): R {
    if (isEmpty()) throw
    NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v =
        selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced by [selector] function
 * applied to each element in the
 * array.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution
ByLambdaReturnType
@ExperimentalUnsignedTypes
@kotlin.internal.InlineOnly
public inline fun <R :
Comparable<R>> UByteArray.minOf(selector: (UByte) -> R): R {
    if (isEmpty()) throw
    NoSuchElementException()
    var minValue = selector(this[0])
    for (i in 1..lastIndex) {
        val v =
        selector(this[i])
        if (minValue > v) {
            minValue = v
        }
    }
    return minValue
}
/**
 * Returns the smallest value among all values produced by [selector] function
 * applied to each element in the
 * array.
 * @throws NoSuchElementException if the array is empty.
 */
@SinceKotlin("1.4")
@OptIn(kotlin.experimental.ExperimentalTypeInference::class)
@OverloadResolution

```

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ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R :
Comparable<R>> UShortArray.minOf(selector: (UShort) -> R): R {\n if (isEmpty()) throw
NoSuchElementException()\n var minValue = selector(this[0])\n for (i in 1..lastIndex) {\n val v =
selector(this[i])\n if (minValue > v) {\n minValue = v\n }\n }\n return minValue\n}\n\n/**\n *
Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array
or `null` if there are no elements.\n * \n * If any of values produced by [selector] function is `NaN`, the returned
result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.minOfOrNull(selector: (UInt) -> Double): Double? {\n if (isEmpty()) return null\n var minValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.minOfOrNull(selector: (ULong) -> Double): Double? {\n if (isEmpty()) return null\n var minValue
= selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.minOfOrNull(selector: (UByte) -> Double): Double? {\n if (isEmpty()) return null\n var minValue
= selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.minOfOrNull(selector: (UShort) -> Double): Double? {\n if (isEmpty()) return null\n var minValue
= selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by
[selector] function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.minOfOrNull(selector: (UInt) -> Float): Float? {\n if (isEmpty()) return null\n var minValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]
function is `NaN`, the returned result is `NaN`.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.minOfOrNull(selector: (ULong) -> Float): Float? {\n if (isEmpty()) return null\n var minValue =
selector(this[0])\n for (i in 1..lastIndex) {\n val v = selector(this[i])\n minValue = minOf(minValue, v)\n
}\n return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n *
applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]

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function is `NaN`, the returned result is `NaN`.\n

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUByteArray.minOfOrNull(selector: (UByte) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue =\n    selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n * \n * If any of values produced by [selector]\n function is `NaN`, the returned result is `NaN`.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun\nUShortArray.minOfOrNull(selector: (UShort) -> Float): Float? {\n    if (isEmpty()) return null\n    var minValue =\n    selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        minValue = minOf(minValue, v)\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nUIntArray.minOfOrNull(selector: (UInt) -> R): R? {\n    if (isEmpty()) return null\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values\n produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nULongArray.minOfOrNull(selector: (ULong) -> R): R? {\n    if (isEmpty()) return null\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values\n produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nUByteArray.minOfOrNull(selector: (UByte) -> R): R? {\n    if (isEmpty()) return null\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value among all values\n produced by [selector] function\n * applied to each element in the array or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R : Comparable<R>>\nUShortArray.minOfOrNull(selector: (UShort) -> R): R? {\n    if (isEmpty()) return null\n    var\n    minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v = selector(this[i])\n        if (minValue > v) {\n            minValue = v\n        }\n    }\n    return minValue\n}\n\n/**\n * Returns the smallest value according to the\n provided [comparator]\n * among all values produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if the array is empty.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUIntArray.minOfWith(comparator: Comparator<in R>, selector: (UInt) -> R): R {\n    if (isEmpty()) throw\n    NoSuchElementException()\n    var minValue = selector(this[0])\n    for (i in 1..lastIndex) {\n        val v =\n        selector(this[i])\n        if (comparator.compare(minValue, v) > 0) {\n            minValue = v\n        }\n    }\n    return\n    minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values\n produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if\n the array is empty.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
```

```

ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.minOfWith(comparator: Comparator<in R>, selector: (ULong) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if
the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.minOfWith(comparator: Comparator<in R>, selector: (UByte) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array.\n * \n * @throws NoSuchElementException if
the array is empty.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.minOfWith(comparator: Comparator<in R>, selector: (UShort) -> R): R {\n  if (isEmpty()) throw
NoSuchElementException()\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v =
selector(this[i])\n    if (comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return
minValue\n}\n\n/**\n * Returns the smallest value according to the provided [comparator]\n * among all values
produced by [selector] function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UIntArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UInt) -> R): R? {\n  if (isEmpty()) return
null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
ULongArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (ULong) -> R): R? {\n  if (isEmpty())
return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UByteArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UByte) -> R): R? {\n  if (isEmpty())
return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>
UShortArray.minOfWithOrNull(comparator: Comparator<in R>, selector: (UShort) -> R): R? {\n  if (isEmpty())
return null\n  var minValue = selector(this[0])\n  for (i in 1..lastIndex) {\n    val v = selector(this[i])\n    if
(comparator.compare(minValue, v) > 0) {\n      minValue = v\n    }\n  }\n  return minValue\n}\n\n/**\n *
Returns the smallest value according to the provided [comparator]\n * among all values produced by [selector]
function applied to each element in the array or `null` if there are no elements.\n

```

Returns the smallest element or `null` if there are no elements.\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.minOrNull(): UInt? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.minOrNull(): ULong? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.minOrNull(): UByte? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n/**\n * Returns the smallest element or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.minOrNull(): UShort? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (min > e) min = e\n    }\n    return min\n}\n\n@Deprecated("Use minWithOrNull instead.",
```

```
ReplaceWith("this.minWithOrNull(comparator)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
```

```
UIntArray.minWith(comparator: Comparator<in UInt>): UInt? {\n    return
```

```
minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
```

```
ReplaceWith("this.minWithOrNull(comparator)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
```

```
ULongArray.minWith(comparator: Comparator<in ULong>): ULong? {\n    return
```

```
minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
```

```
ReplaceWith("this.minWithOrNull(comparator)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
```

```
UByteArray.minWith(comparator: Comparator<in UByte>): UByte? {\n    return
```

```
minWithOrNull(comparator)\n}\n\n@Deprecated("Use minWithOrNull instead.",
```

```
ReplaceWith("this.minWithOrNull(comparator)")\n)\n@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.5", hiddenSince = "1.6")\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
```

```
UShortArray.minWith(comparator: Comparator<in UShort>): UShort? {\n    return
```

```
minWithOrNull(comparator)\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UIntArray.minWithOrNull(comparator: Comparator<in UInt>): UInt? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun ULongArray.minWithOrNull(comparator: Comparator<in ULong>): ULong? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UByteArray.minWithOrNull(comparator: Comparator<in UByte>): UByte? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns the first element having the smallest value according to the provided [comparator] or `null` if there are no elements.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun UShortArray.minWithOrNull(comparator: Comparator<in UShort>): UShort? {\n    if (isEmpty()) return null\n    var min = this[0]\n    for (i in 1..lastIndex) {\n        val e = this[i]\n        if (comparator.compare(min, e) > 0) min = e\n    }\n    return min\n}\n\n/**\n * Returns
```

```
`true` if the array has no elements.\n * \n * @sample samples.collections.Collections.Aggregates.none\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
```

```
UIntArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n * 
```

```

@sample samples.collections.Collections.Aggregates.none\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n
* @sample samples.collections.Collections.Aggregates.none\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if the array has no elements.\n * \n
* @sample samples.collections.Collections.Aggregates.none\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.none(): Boolean {\n    return isEmpty()\n}\n\n/**\n * Returns `true` if no elements match the given
[predicate].\n * \n * @sample samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.none(predicate: (UInt) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.none(predicate: (ULong) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.none(predicate: (UByte) -> Boolean): Boolean {\n    for (element in this) if (predicate(element)) return
false\n    return true\n}\n\n/**\n * Returns `true` if no elements match the given [predicate].\n * \n * @sample
samples.collections.Collections.Aggregates.noneWithPredicate\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.none(predicate: (UShort) -> Boolean): Boolean {\n    for (element in this) if (predicate(element))
return false\n    return true\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself
afterwards.\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UIntArray.onEach(action: (UInt) -> Unit): UIntArray {\n    return apply { for (element in this)
action(element) }\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself
afterwards.\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun ULongArray.onEach(action: (ULong) -> Unit): ULongArray {\n    return apply { for (element in this)
action(element) }\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself
afterwards.\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UByteArray.onEach(action: (UByte) -> Unit): UByteArray {\n    return apply { for (element in this)
action(element) }\n}\n\n/**\n * Performs the given [action] on each element and returns the array itself
afterwards.\n *\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic
inline fun UShortArray.onEach(action: (UShort) -> Unit): UShortArray {\n    return apply { for (element in this)
action(element) }\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index with the
element,\n * and returns the array itself afterwards.\n * @param [action] function that takes the index of an element
and the element itself\n * and performs the action on the element.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.onEachIndexed(action: (index: Int, UInt) -> Unit): UIntArray {\n    return apply {
forEachIndexed(action) }\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index
with the element,\n * and returns the array itself afterwards.\n * @param [action] function that takes the index of an
element and the element itself\n * and performs the action on the element.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.onEachIndexed(action: (index: Int, ULong) -> Unit): ULongArray {\n    return apply {
forEachIndexed(action) }\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index
with the element,\n * and returns the array itself afterwards.\n * @param [action] function that takes the index of an

```

element and the element itself\n \* and performs the action on the element.\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.onEachIndexed(action: (index: Int, UByte) -> Unit): UByteArray {\n    return apply {\n        forEachIndexed(action) }\n}\n\n/**\n * Performs the given [action] on each element, providing sequential index  
with the element,\n * and returns the array itself afterwards.\n * @param [action] function that takes the index of an  
element and the element itself\n * and performs the action on the element.\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.onEachIndexed(action: (index: Int, UShort) -> Unit): UShortArray {\n    return apply {\n        forEachIndexed(action) }\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation]  
from left to right\n * to current accumulator value and each element.\n * \n * Throws an exception if this array is  
empty. If the array can be empty in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its  
receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.reduce(operation: (acc: UInt, UInt) -> UInt): UInt {\n    if (isEmpty())\n        throw  
UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = this[0]\n    for (index in  
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current  
accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty  
in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next  
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.reduce(operation: (acc: ULong, ULong) -> ULong): ULong {\n    if (isEmpty())\n        throw  
UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = this[0]\n    for (index in  
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current  
accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty  
in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next  
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.reduce(operation: (acc: UByte, UByte) -> UByte): UByte {\n    if (isEmpty())\n        throw  
UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = this[0]\n    for (index in  
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current  
accumulator value and each element.\n * \n * Throws an exception if this array is empty. If the array can be empty  
in an expected way,\n * please use [reduceOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes current accumulator value and an element,\n * and calculates the next  
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduce\n
```

```
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.reduce(operation: (acc: UShort, UShort) -> UShort): UShort {\n    if (isEmpty())\n        throw  
UnsupportedOperationException("Empty array can't be reduced.")\n    var accumulator = this[0]\n    for (index in  
1..lastIndex) {\n        accumulator = operation(accumulator, this[index])\n    }\n    return accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to right\n * to current  
accumulator value and each element with its index in the original array.\n * \n * Throws an exception if this array is  
empty. If the array can be empty in an expected way,\n * please use [reduceIndexedOrNull] instead. It returns `null`  
when its receiver is empty.\n * \n * @param [operation] function that takes the index of an element, current
```

accumulator value and the element itself,\n \* and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.reduce\n

```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceIndexed(operation: (index: Int, acc: UInt, UInt) -> UInt): UInt {\n if (isEmpty())\n throw
UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for (index in
1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceIndexedOrNull]
instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduce\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceIndexed(operation: (index: Int, acc: ULong, ULong) -> ULong): ULong {\n if (isEmpty())\n
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceIndexedOrNull]
instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduce\n

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```

*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduceIndexed(operation: (index: Int, acc: UByte, UByte) -> UByte): UByte {\n if (isEmpty())\n
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use [reduceIndexedOrNull]
instead. It returns `null` when its receiver is empty.\n * \n * @param [operation] function that takes the index of an
element, current accumulator value and the element itself,\n * and calculates the next accumulator value.\n * \n *
@sample samples.collections.Collections.Aggregates.reduce\n

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*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceIndexed(operation: (index: Int, acc: UShort, UShort) -> UShort): UShort {\n if (isEmpty())\n
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = this[0]\n for
(index in 1..lastIndex) {\n accumulator = operation(index, accumulator, this[index])\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the first element and applying [operation] from left to
right\n * to current accumulator value and each element with its index in the original array.\n * \n * Returns `null` if
the array is empty.\n * \n * @param [operation] function that takes the index of an element, current accumulator
value and the element itself,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n

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*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceIndexedOrNull(operation: (index: Int, acc: UInt, UInt) -> UInt): UInt? {\n if (isEmpty())\n
return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator = operation(index,
accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates value starting with the first
element and applying [operation] from left to right\n * to current accumulator value and each element with its index
in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes the
index of an element, current accumulator value and the element itself,\n * and calculates the next accumulator

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value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceIndexedOrNull(operation: (index: Int, acc: ULong, ULong) -> ULong): ULong? {\n if
(isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =
operation(index, accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting
with the first element and applying [operation] from left to right\n * to current accumulator value and each element
with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduceIndexedOrNull(operation: (index: Int, acc: UByte, UByte) -> UByte): UByte? {\n if
(isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =
operation(index, accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting
with the first element and applying [operation] from left to right\n * to current accumulator value and each element
with its index in the original array.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation]
function that takes the index of an element, current accumulator value and the element itself,\n * and calculates the
next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceIndexedOrNull(operation: (index: Int, acc: UShort, UShort) -> UShort): UShort? {\n if
(isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n accumulator =
operation(index, accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value starting
with the first element and applying [operation] from left to right\n * to current accumulator value and each
element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current
accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceOrNull(operation: (acc: UInt, UInt) -> UInt): UInt?
{\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex) {\n
accumulator = operation(accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates value
starting with the first element and applying [operation] from left to right\n * to current accumulator value and each
element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current
accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceOrNull(operation: (acc: ULong, ULong) ->
ULong): ULong? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex)
{\n accumulator = operation(accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates
value starting with the first element and applying [operation] from left to right\n * to current accumulator value and
each element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current
accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceOrNull(operation: (acc: UByte, UByte) ->
UByte): UByte? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex)
{\n accumulator = operation(accumulator, this[index])\n } \n return accumulator\n}\n\n/**\n * Accumulates
value starting with the first element and applying [operation] from left to right\n * to current accumulator value and
each element.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that takes current
accumulator value and an element,\n * and calculates the next accumulator value.\n * \n * @sample

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samples.collections.Collections.Aggregates.reduceOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceOrNull(operation: (acc: UShort, UShort) ->
UShort): UShort? {\n if (isEmpty())\n return null\n var accumulator = this[0]\n for (index in 1..lastIndex)
{\n accumulator = operation(accumulator, this[index])\n }\n return accumulator\n}\n\n/**\n * Accumulates
value starting with the last element and applying [operation] from right to left\n * to each element and current
accumulator value.\n * \n * Throws an exception if this array is empty. If the array can be empty in an expected
way,\n * please use [reduceRightOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param
[operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.reduceRight(operation: (UInt, acc: UInt) -> UInt): UInt {\n var index = lastIndex\n if (index < 0)
throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = get(index--)\n
while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If the
array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its
receiver is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceRight(operation: (ULong, acc: ULong) -> ULong): ULong {\n var index = lastIndex\n if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator =
get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If the
array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its
receiver is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduceRight(operation: (UByte, acc: UByte) -> UByte): UByte {\n var index = lastIndex\n if (index
< 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator = get(index--)\n
while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Throws an exception if this array is empty. If the
array can be empty in an expected way,\n * please use [reduceRightOrNull] instead. It returns `null` when its
receiver is empty.\n * \n * @param [operation] function that takes an element and current accumulator value,\n *
and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRight\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceRight(operation: (UShort, acc: UShort) -> UShort): UShort {\n var index = lastIndex\n if
(index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")\n var accumulator =
get(index--)\n while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element with its index in the original array and current accumulator value.\n * \n * Throws an
exception if this array is empty. If the array can be empty in an expected way,\n * please use
[reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.\n * \n * @param [operation]

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function that takes the index of an element, the element itself and current accumulator value,
 * and calculates the next accumulator value.
 * @sample samples.collections.Collections.Aggregates.reduceRight
 *
 * \n @SinceKotlin("1.3") \n @ExperimentalUnsignedTypes \n @kotlin.internal.InlineOnly \n public inline fun
 UIntArray.reduceRightIndexed(operation: (index: Int, UInt, acc: UInt) -> UInt): UInt {
 \n     var index = lastIndex
 \n     if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
 \n     var accumulator = get(index--)
 \n     while (index >= 0) {
 \n         accumulator = operation(index, get(index), accumulator)
 \n         --index
 \n     }
 \n     return accumulator
 \n }
 * Accumulates value starting with the last element and applying [operation]
 from right to left
 * to each element with its index in the original array and current accumulator value.
 * Throws an exception if this array is empty. If the array can be empty in an expected way,
 * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.
 * @param [operation] function that takes the index of an element, the element itself and current accumulator value,
 * and calculates the next accumulator value.
 * @sample samples.collections.Collections.Aggregates.reduceRight
 *
 * \n @SinceKotlin("1.3") \n @ExperimentalUnsignedTypes \n @kotlin.internal.InlineOnly \n public inline fun
 ULongArray.reduceRightIndexed(operation: (index: Int, ULong, acc: ULong) -> ULong): ULong {
 \n     var index =
lastIndex
 \n     if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
 \n     var
accumulator = get(index--)
 \n     while (index >= 0) {
 \n         accumulator = operation(index, get(index),
accumulator)
 \n         --index
 \n     }
 \n     return accumulator
 \n }
 * Accumulates value starting with the last
element and applying [operation] from right to left
 * to each element with its index in the original array and
current accumulator value.
 * Throws an exception if this array is empty. If the array can be empty in an
expected way,
 * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.
 * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,
 * and calculates the next accumulator value.
 * @sample
samples.collections.Collections.Aggregates.reduceRight
 *
 * \n @SinceKotlin("1.3") \n @ExperimentalUnsignedTypes \n @kotlin.internal.InlineOnly \n public inline fun
 UByteArray.reduceRightIndexed(operation: (index: Int, UByte, acc: UByte) -> UByte): UByte {
 \n     var index =
lastIndex
 \n     if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
 \n     var
accumulator = get(index--)
 \n     while (index >= 0) {
 \n         accumulator = operation(index, get(index),
accumulator)
 \n         --index
 \n     }
 \n     return accumulator
 \n }
 * Accumulates value starting with the last
element and applying [operation] from right to left
 * to each element with its index in the original array and
current accumulator value.
 * Throws an exception if this array is empty. If the array can be empty in an
expected way,
 * please use [reduceRightIndexedOrNull] instead. It returns `null` when its receiver is empty.
 * @param [operation] function that takes the index of an element, the element itself and current accumulator
value,
 * and calculates the next accumulator value.
 * @sample
samples.collections.Collections.Aggregates.reduceRight
 *
 * \n @SinceKotlin("1.3") \n @ExperimentalUnsignedTypes \n @kotlin.internal.InlineOnly \n public inline fun
 UShortArray.reduceRightIndexed(operation: (index: Int, UShort, acc: UShort) -> UShort): UShort {
 \n     var index =
lastIndex
 \n     if (index < 0) throw UnsupportedOperationException("Empty array can't be reduced.")
 \n     var
accumulator = get(index--)
 \n     while (index >= 0) {
 \n         accumulator = operation(index, get(index),
accumulator)
 \n         --index
 \n     }
 \n     return accumulator
 \n }
 * Accumulates value starting with the last
element and applying [operation] from right to left
 * to each element with its index in the original array and
current accumulator value.
 * Returns `null` if the array is empty.
 * @param [operation] function that
takes the index of an element, the element itself and current accumulator value,
 * and calculates the next
accumulator value.
 * @sample samples.collections.Collections.Aggregates.reduceRightOrNull
 *
 * \n @SinceKotlin("1.4") \n @ExperimentalUnsignedTypes \n @kotlin.internal.InlineOnly \n public inline fun
 UIntArray.reduceRightIndexedOrNull(operation: (index: Int, UInt, acc: UInt) -> UInt?): UInt? {
 \n     var index =
lastIndex
 \n     if (index < 0) return null
 \n     var accumulator = get(index--)
 \n     while (index >= 0) {
 \n         accumulator = operation(index, get(index), accumulator)
 \n         --index
 \n     }
 \n     return accumulator
 \n }
 * Accumulates value starting with the last element and applying [operation] from right to left
 * to each element with

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its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.reduceRightIndexedOrNull(operation: (index: Int, ULong, acc: ULong) -> ULong): ULong? {\n var
index = lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.reduceRightIndexedOrNull(operation: (index: Int, UByte, acc: UByte) -> UByte): UByte? {\n var
index = lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element with
its index in the original array and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n *
@param [operation] function that takes the index of an element, the element itself and current accumulator value,\n
* and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.reduceRightIndexedOrNull(operation: (index: Int, UShort, acc: UShort) -> UShort): UShort? {\n var
index = lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index >= 0) {\n
accumulator = operation(index, get(index), accumulator)\n --index\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and
current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that
takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UIntArray.reduceRightOrNull(operation: (UInt, acc: UInt) -> UInt):
UInt? {\n var index = lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n while (index
>= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return accumulator\n}\n\n/**\n *
Accumulates value starting with the last element and applying [operation] from right to left\n * to each element and
current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param [operation] function that
takes an element and current accumulator value,\n * and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun ULongArray.reduceRightOrNull(operation: (ULong, acc: ULong) ->
ULong): ULong? {\n var index = lastIndex\n if (index < 0) return null\n var accumulator = get(index--)\n
while (index >= 0) {\n accumulator = operation(get(index--), accumulator)\n }\n return
accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to
left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param
[operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator
value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun UByteArray.reduceRightOrNull(operation: (UByte, acc: UByte) ->

```

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UByte): UByte? {\n  var index = lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return\n  accumulator\n}\n\n/**\n * Accumulates value starting with the last element and applying [operation] from right to\n * left\n * to each element and current accumulator value.\n * \n * Returns `null` if the array is empty.\n * \n * @param\n [operation] function that takes an element and current accumulator value,\n * and calculates the next accumulator\n value.\n * \n * @sample samples.collections.Collections.Aggregates.reduceRightOrNull\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.reduceRightOrNull(operation: (UShort, acc: UShort) ->\nUShort): UShort? {\n  var index = lastIndex\n  if (index < 0) return null\n  var accumulator = get(index--)\n  while (index >= 0) {\n    accumulator = operation(get(index--), accumulator)\n  }\n  return\n  accumulator\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying\n [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the\n previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an\n element, and calculates the next accumulator value.\n * \n * @sample\n samples.collections.Collections.Aggregates.runningFold\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUIntArray.runningFold(initial: R, operation: (acc: R, UInt) -> R): List<R> {\n  if (isEmpty()) return\n  listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n  for\n (element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying\n [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the\n previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an\n element, and calculates the next accumulator value.\n * \n * @sample\n samples.collections.Collections.Aggregates.runningFold\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nULongArray.runningFold(initial: R, operation: (acc: R, ULong) -> R): List<R> {\n  if (isEmpty()) return\n  listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n  for\n (element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying\n [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the\n previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an\n element, and calculates the next accumulator value.\n * \n * @sample\n samples.collections.Collections.Aggregates.runningFold\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUByteArray.runningFold(initial: R, operation: (acc: R, UByte) -> R): List<R> {\n  if (isEmpty()) return\n  listOf(initial)\n  val result = ArrayList<R>(size + 1).apply { add(initial) }\n  var accumulator = initial\n  for\n (element in this) {\n    accumulator = operation(accumulator, element)\n    result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying\n [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the\n previous value in resulting list.\n * \n * @param [operation] function that takes current @accumulator value and an\n element, and calculates the next accumulator value.\n * \n * @sample\n samples.collections.Collections.Aggregates.runningFold\n\n*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R>\nUShortArray.runningFold(initial: R, operation: (acc: R, UShort) -> R): List<R> {\n  if (isEmpty()) return

```

```

listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (element in this) {\n        accumulator = operation(accumulator, element)\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UByte) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * @sample samples.collections.Collections.Aggregates.runningFold\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.runningFoldIndexed(initial: R, operation: (index: Int, acc: R, UShort) -> R): List<R> {\n    if (isEmpty())\n        return listOf(initial)\n    val result = ArrayList<R>(size + 1).apply { add(initial) }\n    var accumulator = initial\n    for (index in indices) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with the first element of this array.\n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * @sample samples.collections.Collections.Aggregates.runningReduce\n

```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.runningReduce(operation: (acc: UInt, UInt) -> UInt): List<UInt> {\n    if (isEmpty()) return  
emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UInt>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying  
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of  
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would  
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value  
and an element, and calculates the next accumulator value.\n * \n * @sample  
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
ULongArray.runningReduce(operation: (acc: ULong, ULong) -> ULong): List<ULong> {\n    if (isEmpty()) return  
emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<ULong>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying  
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of  
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would  
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value  
and an element, and calculates the next accumulator value.\n * \n * @sample  
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UByteArray.runningReduce(operation: (acc: UByte, UByte) -> UByte): List<UByte> {\n    if (isEmpty()) return  
emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UByte>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying  
[operation] from left to right\n * to each element and current accumulator value that starts with the first element of  
this array.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would  
affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value  
and an element, and calculates the next accumulator value.\n * \n * @sample  
samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UShortArray.runningReduce(operation: (acc: UShort, UShort) -> UShort): List<UShort> {\n    if (isEmpty()) return  
emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UShort>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying  
[operation] from left to right\n * to each element, its index in the original array and current accumulator value that  
starts with the first element of this array.\n * \n * Note that `acc` value passed to [operation] function should not be  
mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that  
takes the index of an element, current accumulator value\n * and the element itself, and calculates the next  
accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.runningReduce\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun  
UIntArray.runningReduceIndexed(operation: (index: Int, acc: UInt, UInt) -> UInt): List<UInt> {\n    if (isEmpty())  
return emptyList()\n    var accumulator = this[0]\n    val result = ArrayList<UInt>(size).apply { add(accumulator) }\n    for (index in 1 until size) {\n        accumulator = operation(index, accumulator, this[index])\n        result.add(accumulator)\n    }\n    return result\n}\n\n/**\n * Returns a list containing successive accumulation  
values generated by applying [operation] from left to right\n * to each element, its index in the original array and  
current accumulator value that starts with the first element of this array.\n * \n * Note that `acc` value passed to  
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * \n *
```

@param [operation] function that takes the index of an element, current accumulator value and the element itself, and calculates the next accumulator value.

@sample  
samples.collections.Collections.Aggregates.runningReduce

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.runningReduceIndexed(operation: (index: Int, acc: ULong, ULong) -> ULong): List<ULong> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<ULong>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
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@param [operation] function that takes the index of an element, current accumulator value\n * and the element
itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UByteArray.runningReduceIndexed(operation: (index: Int, acc: UByte, UByte) -> UByte): List<UByte> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UByte>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element, its index in the original array and
current accumulator value that starts with the first element of this array.\n * \n * Note that `acc` value passed to
[operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n *
@param [operation] function that takes the index of an element, current accumulator value\n * and the element
itself, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.runningReduce\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.runningReduceIndexed(operation: (index: Int, acc: UShort, UShort) -> UShort): List<UShort> {\n  if
(isEmpty()) return emptyList()\n  var accumulator = this[0]\n  val result = ArrayList<UShort>(size).apply {
add(accumulator) }\n  for (index in 1 until size) {\n    accumulator = operation(index, accumulator, this[index])\n
result.add(accumulator)\n  }\n  return result\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.scan(initial: R, operation: (acc: R, UInt) -> R):
List<R> {\n  return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
samples.collections.Collections.Aggregates.scan\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n
@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.scan(initial: R, operation: (acc: R, ULong) -> R):
List<R> {\n  return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation
values generated by applying [operation] from left to right\n * to each element and current accumulator value that
starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n *
otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current
accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample
```

otherwise it would affect the previous value in resulting list.\n \* \n \* @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n \* \n \* @sample samples.collections.Collections.Aggregates.scan\n

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.scan(initial: R, operation: (acc: R, UByte) -> R): List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes current accumulator value and an element, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.scan(initial: R, operation: (acc: R, UShort) -> R): List<R> {\n    return runningFold(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> UIntArray.scanIndexed(initial: R, operation: (index: Int, acc: R, UInt) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> ULongArray.scanIndexed(initial: R, operation: (index: Int, acc: R, ULong) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> UByteArray.scanIndexed(initial: R, operation: (index: Int, acc: R, UByte) -> R): List<R> {\n    return runningFoldIndexed(initial, operation)\n}\n\n/**\n * Returns a list containing successive accumulation values generated by applying [operation] from left to right\n * to each element, its index in the original array and current accumulator value that starts with [initial] value.\n * \n * Note that `acc` value passed to [operation] function should not be mutated;\n * otherwise it would affect the previous value in resulting list.\n * \n * @param [operation] function that takes the index of an element, current accumulator value\n * and the element itself, and calculates the next accumulator value.\n * \n * @sample samples.collections.Collections.Aggregates.scan\n
```

```
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun <R> UShortArray.scanIndexed(initial: R, operation: (index: Int, acc:
```

```

R, UShort) -> R): List<R> {
    return runningFoldIndexed(initial, operation)
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UIntArray.sumBy(selector: (UInt) -> UInt): UInt {
    var sum: UInt = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun ULongArray.sumBy(selector: (ULong) -> UInt): UInt {
    var sum: UInt = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UByteArray.sumBy(selector: (UByte) -> UInt): UInt {
    var sum: UInt = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UShortArray.sumBy(selector: (UShort) -> UInt): UInt {
    var sum: UInt = 0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UIntArray.sumByDouble(selector: (UInt) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun ULongArray.sumByDouble(selector: (ULong) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UByteArray.sumByDouble(selector: (UByte) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @Deprecated("Use sumOf instead.", ReplaceWith("this.sumOf(selector)"))
 * @DeprecatedSinceKotlin(warningSince = "1.5")
 * @SinceKotlin("1.3")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UShortArray.sumByDouble(selector: (UShort) -> Double): Double {
    var sum: Double = 0.0
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.
 * @SinceKotlin("1.4")
 * @OptIn(kotlin.experimental.ExperimentalTypeInference::class)
 * @OverloadResolutionByLambdaReturnType
 * @Suppress("INAPPLICABLE_JVM_NAME")
 * @kotlin.jvm.JvmName("sumOfDouble")
 * @ExperimentalUnsignedTypes
 * @kotlin.internal.InlineOnly
 * public inline fun UIntArray.sumOf(selector: (UInt) -> Double): Double {
    var sum: Double = 0.toDouble()
    for (element in this) {
        sum += selector(element)
    }
    return sum
}

/** Returns the sum of all values produced by [selector] function applied to each element in the array.

```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfDouble")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector:\n(ULong) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=\n        selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n    applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfDouble")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector:\n(UByte) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=\n        selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n    applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfDouble")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector:\n(UShort) -> Double): Double {\n    var sum: Double = 0.toDouble()\n    for (element in this) {\n        sum +=\n        selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\n    applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfInt")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumOf(selector: (UInt) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the\n    array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfInt")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector:\n(ULong) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n    the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfInt")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector:\n(UByte) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n    the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfInt")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector:\n(UShort) -> Int): Int {\n    var sum: Int = 0.toInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n    the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UIntArray.sumOf(selector: (UInt)\n-> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in\n    the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector:\n(ULong) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\napplied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector:\n(UByte) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\napplied to each element in the array.\n
```

```
*\n@SinceKotlin("1.4")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfLong")\n\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector:\n(UShort) -> Long): Long {\n    var sum: Long = 0.toLong()\n    for (element in this) {\n        sum +=\nselector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values produced by [selector] function\napplied to each element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun UIntArray.sumOf(selector: (UInt) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all values\nproduced by [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun ULongArray.sumOf(selector: (ULong) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all\nvalues produced by [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun UByteArray.sumOf(selector: (UByte) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all\nvalues produced by [selector] function applied to each element in the array.\n
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```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfUInt")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inline\nOnly\npublic inline fun UShortArray.sumOf(selector: (UShort) -> UInt): UInt {\n    var sum: UInt = 0.toUInt()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all\nvalues produced by [selector] function applied to each element in the array.\n
```

```
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution\nByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.Inli\nneOnly\npublic inline fun UIntArray.sumOf(selector: (UInt) -> ULong): ULong {\n    var sum: ULong =\n0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n\n/**\n * Returns\nthe sum of all values produced by [selector] function applied to each element in the array.\n
```

```

*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULongArray.sumOf(selector: (ULong) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByteArray.sumOf(selector: (UByte) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n/**\n * Returns the sum of all values produced by [selector] function applied to each element in the array.\n
*\n@SinceKotlin("1.5")\n@OptIn(kotlin.experimental.ExperimentalTypeInference::class)\n@OverloadResolution
ByLambdaReturnType\n@Suppress("INAPPLICABLE_JVM_NAME")\n@kotlin.jvm.JvmName("sumOfULong")\n@ExperimentalUnsignedTypes\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShortArray.sumOf(selector: (UShort) -> ULong): ULong {\n    var sum: ULong = 0.toULong()\n    for (element in this) {\n        sum += selector(element)\n    }\n    return sum\n}\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UIntArray.zip(other: Array<out R>): List<Pair<UInt, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other: Array<out R>): List<Pair<ULong, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other: Array<out R>): List<Pair<UByte, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UShortArray.zip(other: Array<out R>): List<Pair<UShort, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> UIntArray.zip(other: Array<out R>, transform: (a: UInt, b: R) -> V): List<V> {\n    val size = minOf(size, other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V> ULongArray.zip(other: Array<out R>, transform: (a: ULong, b: R) -> V): List<V> {\n    val size = minOf(size, other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned

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list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UByteArray.zip(other: Array<out R>, transform: (a: UByte, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array
with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned
list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UShortArray.zip(other: Array<out R>, transform: (a: UShort, b: R) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` collection and [other] array with
the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UIntArray.zip(other:
Iterable<R>): List<Pair<UInt, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> ULongArray.zip(other:
Iterable<R>): List<Pair<ULong, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UByteArray.zip(other:
Iterable<R>): List<Pair<UByte, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs
built from the elements of `this` collection and [other] array with the same index.\n * The returned list has length of
the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun <R> UShortArray.zip(other:
Iterable<R>): List<Pair<UShort, R>> {\n    return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of
values built from the elements of `this` array and the [other] collection with the same index\n * using the provided
[transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n *
\n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UIntArray.zip(other: Iterable<R>, transform: (a: UInt, b: R) -> V): List<V> {\n    val arraySize = size\n    val list =
ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n
if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n * Returns a
list of values built from the elements of `this` array and the [other] collection with the same index\n * using the
provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest
collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
ULongArray.zip(other: Iterable<R>, transform: (a: ULong, b: R) -> V): List<V> {\n    val arraySize = size\n    val
list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other)
{\n        if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n *
Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n *
using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>
UByteArray.zip(other: Iterable<R>, transform: (a: UByte, b: R) -> V): List<V> {\n    val arraySize = size\n    val list
= ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n    var i = 0\n    for (element in other) {\n
if (i >= arraySize) break\n        list.add(transform(this[i++], element))\n    }\n    return list\n}\n\n/**\n *
Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n *
using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the
shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n

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= ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n  for (element in other) {\n    if (i >= arraySize) break\n    list.add(transform(this[i++], element))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] collection with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <R, V>\nUShortArray.zip(other: Iterable<R>, transform: (a: UShort, b: R) -> V): List<V> {\n  val arraySize = size\n  val list = ArrayList<V>(minOf(other.collectionSizeOrDefault(10), arraySize))\n  var i = 0\n  for (element in other) {\n    if (i >= arraySize) break\n    list.add(transform(this[i++], element))\n  }\n  return list\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UIntArray.zip(other: UIntArray): List<Pair<UInt, UInt>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun ULongArray.zip(other: ULongArray): List<Pair<ULong, ULong>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UByteArray.zip(other: UByteArray): List<Pair<UByte, UByte>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of pairs built from the elements of `this` array and the [other] array with the same index.\n * The returned list has length of the shortest collection.\n * \n * @sample samples.collections.Iterables.Operations.zipIterable\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic infix fun UShortArray.zip(other: UShortArray): List<Pair<UShort, UShort>> {\n  return zip(other) { t1, t2 -> t1 to t2 }\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>\nUIntArray.zip(other: UIntArray, transform: (a: UInt, b: UInt) -> V): List<V> {\n  val size = minOf(size, other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i], other[i]))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>\nULongArray.zip(other: ULongArray, transform: (a: ULong, b: ULong) -> V): List<V> {\n  val size = minOf(size, other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i], other[i]))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned list has length of the shortest array.\n * \n * @sample samples.collections.Iterables.Operations.zipIterableWithTransform\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>\nUByteArray.zip(other: UByteArray, transform: (a: UByte, b: UByte) -> V): List<V> {\n  val size = minOf(size, other.size)\n  val list = ArrayList<V>(size)\n  for (i in 0 until size) {\n    list.add(transform(this[i], other[i]))\n  }\n  return list\n}\n\n/**\n * Returns a list of values built from the elements of `this` array and the [other] array with the same index\n * using the provided [transform] function applied to each pair of elements.\n * The returned

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list has length of the shortest array.\n * \n * @sample
samples.collections.Iterables.Operations.zipIterableWithTransform\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun <V>
UShortArray.zip(other: UShortArray, transform: (a: UShort, b: UShort) -> V): List<V> {\n    val size = minOf(size,
other.size)\n    val list = ArrayList<V>(size)\n    for (i in 0 until size) {\n        list.add(transform(this[i], other[i]))\n    }\n    return list\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT
ypes::class)\npublic fun Array<out UInt>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfULong")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Array<out ULong>.sum(): ULong {\n    var sum: ULong = 0uL\n    for (element in this)
{\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUByte")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Array<out UByte>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the array.\n
*\n@kotlin.jvm.JvmName("sumOfUShort")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Array<out UShort>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n
sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UIntArray.sum(): UInt {\n    return storage.sum().toUInt()\n}\n\n/**\n * Returns the sum of all elements in the
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
ULongArray.sum(): ULong {\n    return storage.sum().toULong()\n}\n\n/**\n * Returns the sum of all elements in
the array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline
fun UByteArray.sum(): UInt {\n    return sumOf { it.toUInt() }\n}\n\n/**\n * Returns the sum of all elements in the
array.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\n@kotlin.internal.InlineOnly\npublic inline fun
UShortArray.sum(): UInt {\n    return sumOf { it.toUInt() }\n}\n\n", "*/\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("UCollectionsKt")\n\npackage
kotlin.collections\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\nimport
kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns an array of UByte containing all of the
elements of this collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
Collection<UByte>.toUByteArray(): UByteArray {\n    val result = UByteArray(size)\n    var index = 0\n    for
(element in this)\n        result[index++] = element\n    return result\n}\n\n/**\n * Returns an array of UInt containing
all of the elements of this collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
Collection<UInt>.toUIntArray(): UIntArray {\n    val result = UIntArray(size)\n    var index = 0\n    for (element in
this)\n        result[index++] = element\n    return result\n}\n\n/**\n * Returns an array of ULong containing all of the
elements of this collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun
Collection<ULong>.toULongArray(): ULongArray {\n    val result = ULongArray(size)\n    var index = 0\n    for
(element in this)\n        result[index++] = element\n    return result\n}\n\n/**\n * Returns an array of UShort
containing all of the elements of this collection.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Collection<UShort>.toUShortArray():
UShortArray {\n    val result = UShortArray(size)\n    var index = 0\n    for (element in this)\n        result[index++] =
element\n    return result\n}\n\n/**\n * Returns the sum of all elements in the collection.\n
*\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT
ypes::class)\npublic fun Iterable<UInt>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum
+= element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n

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*\n@kotlin.jvm.JvmName("sumOfULong")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun Iterable<ULong>.sum(): ULong {\n    var sum: ULong = 0u\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */
*\n@kotlin.jvm.JvmName("sumOfUByte")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun Iterable<UByte>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n/**\n * Returns the sum of all elements in the collection.\n */
*\n@kotlin.jvm.JvmName("sumOfUShort")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun Iterable<UShort>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("UComparisonsKt")\n\npackage kotlin.comparisons\n\n/\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns the greater of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UInt, b: UInt): UInt {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: ULong, b: ULong): ULong {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UByte, b: UByte): UByte {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun maxOf(a: UShort, b: UShort): UShort {\n    return if (a >= b) a else b\n}\n\n/**\n * Returns the greater of three values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UInt, b: UInt, c: UInt): UInt {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: ULong, b: ULong, c: ULong): ULong {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UByte, b: UByte, c: UByte): UByte {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of three values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun maxOf(a: UShort, b: UShort, c: UShort): UShort {\n    return maxOf(a, maxOf(b, c))\n}\n\n/**\n * Returns the greater of the given values.\n */
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UInt, vararg other: UInt): UInt {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns the greater of the given values.\n */
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: ULong, vararg other: ULong): ULong {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns the greater of the given values.\n */
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UByte, vararg other: UByte): UByte {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns the greater of the given values.\n */
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun maxOf(a: UShort, vararg other: UShort): UShort {\n    var max = a\n    for (e in other) max = maxOf(max, e)\n    return max\n}\n\n/**\n * Returns the smaller of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UInt, b: UInt): UInt {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n */
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: ULong, b: ULong): ULong {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n */

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*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UByte,
b: UByte): UByte {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun minOf(a: UShort,
b: UShort): UShort {\n    return if (a <= b) a else b\n}\n\n/**\n * Returns the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun minOf(a: UInt, b: UInt, c: UInt): UInt {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n * Returns
the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun minOf(a: ULong, b: ULong, c: ULong): ULong {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n *
Returns the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun minOf(a: UByte, b: UByte, c: UByte): UByte {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n *
Returns the smaller of three values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun minOf(a: UShort, b: UShort, c: UShort): UShort {\n    return minOf(a, minOf(b, c))\n}\n\n/**\n *
Returns the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
minOf(a: UInt, vararg other: UInt): UInt {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return
min\n}\n\n/**\n * Returns the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: ULong, vararg other: ULong):
ULong {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n * Returns the smaller
of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun minOf(a: UByte,
vararg other: UByte): UByte {\n    var min = a\n    for (e in other) min = minOf(min, e)\n    return min\n}\n\n/**\n *
Returns the smaller of the given values.\n
*\n@SinceKotlin("1.4")\n@ExperimentalUnsignedTypes\npublic fun
minOf(a: UShort, vararg other: UShort): UShort {\n    var min = a\n    for (e in other) min = minOf(min, e)\n
return min\n}\n\n", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n@n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("URangesKt")\n\npackage
kotlin.ranges\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns a
random element from this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun UIntRange.random(): UInt {\n    return random(Random)\n}\n\n/**\n * Returns a random element
from this range.\n * \n * @throws IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\
npublic inline fun ULongRange.random(): ULong {\n    return random(Random)\n}\n\n/**\n * Returns a random
element from this range using the specified source of randomness.\n * \n * @throws IllegalArgumentException if
this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic
fun UIntRange.random(random: Random): UInt {\n    try {\n        return random.nextUInt(this)\n    } catch(e:
IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a
random element from this range using the specified source of randomness.\n * \n * @throws
IllegalArgumentException if this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULongRange.random(random: Random): ULong {\n    try {\n        return random.nextULong(this)\n    } catch(e:
IllegalArgumentException) {\n        throw NoSuchElementException(e.message)\n    }\n}\n\n/**\n * Returns a
random element from this range, or `null` if this range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UIntRange.randomOrNull():
UInt? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this range, or `null` if this

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range is empty.\n *^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun ULongRange.randomOrNull():
ULong? {\n    return randomOrNull(Random)\n}\n\n/**\n * Returns a random element from this range using the
specified source of randomness, or `null` if this range is empty.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\npublic fun UIntRange.randomOrNull(random: Random): UInt? {\n    if
(isEmpty())\n        return null\n    return random.nextUInt(this)\n}\n\n/**\n * Returns a random element from this
range using the specified source of randomness, or `null` if this range is empty.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\npublic fun ULongRange.randomOrNull(random: Random): ULong? {\n    if
(isEmpty())\n        return null\n    return random.nextULong(this)\n}\n\n/**\n * Returns `true` if this range contains
the specified [element].\n * \n * Always returns `false` if the [element] is `null`.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n
public inline operator fun UIntRange.contains(element: UInt?): Boolean {\n    return element != null &&
contains(element)\n}\n\n/**\n * Returns `true` if this range contains the specified [element].\n * \n * Always returns
`false` if the [element] is `null`.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n
public inline operator fun ULongRange.contains(element: ULong?): Boolean {\n    return element != null &&
contains(element)\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
UIntRange.contains(value: UByte): Boolean {\n    return contains(value.toUInt())\n}\n\n/**\n * Checks if the
specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
ULongRange.contains(value: UByte): Boolean {\n    return contains(value.toULong())\n}\n\n/**\n * Checks if the
specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
ULongRange.contains(value: UInt): Boolean {\n    return contains(value.toULong())\n}\n\n/**\n * Checks if the
specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
UIntRange.contains(value: ULong): Boolean {\n    return (value shr UInt.SIZE_BITS) == 0uL &&
contains(value.toUInt())\n}\n\n/**\n * Checks if the specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
UIntRange.contains(value: UShort): Boolean {\n    return contains(value.toUInt())\n}\n\n/**\n * Checks if the
specified [value] belongs to this range.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic operator fun
ULongRange.contains(value: UShort): Boolean {\n    return contains(value.toULong())\n}\n\n/**\n * Returns a
progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should be less
than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is empty.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UByte.downTo(to: UByte): UIntProgression {\n    return UIntProgression.fromClosedRange(this.toUInt(),
to.toUInt(), -1)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -
1.\n * \n * The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this`
value the returned progression is empty.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UInt.downTo(to: UInt): UIntProgression {\n    return UIntProgression.fromClosedRange(this, to, -1)\n}\n\n/**\n *
Returns a progression from this value down to the specified [to] value with the step -1.\n * \n * The [to] value should
be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the returned progression is
empty.\n
*^@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun

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ULong.downTo(to: ULong): ULongProgression {\n  return ULongProgression.fromClosedRange(this, to, -
1L)\n}\n\n/**\n * Returns a progression from this value down to the specified [to] value with the step -1.\n * \n *
The [to] value should be less than or equal to `this` value.\n * If the [to] value is greater than `this` value the
returned progression is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UShort.downTo(to: UShort): UIntProgression {\n  return UIntProgression.fromClosedRange(this.toUInt(),
to.toUInt(), -1)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the
same step.\n * \n *\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UIntProgression.reversed(): UIntProgression {\n  return UIntProgression.fromClosedRange(last, first, -
step)\n}\n\n/**\n * Returns a progression that goes over the same range in the opposite direction with the same
step.\n * \n *\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULongProgression.reversed(): ULongProgression {\n  return ULongProgression.fromClosedRange(last, first, -
step)\n}\n\n/**\n * Returns a progression that goes over the same range with the given step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UIntProgression.step(step: Int): UIntProgression {\n  checkStepIsPositive(step > 0, step)\n  return
UIntProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a progression
that goes over the same range with the given step.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
ULongProgression.step(step: Long): ULongProgression {\n  checkStepIsPositive(step > 0, step)\n  return
ULongProgression.fromClosedRange(first, last, if (this.step > 0) step else -step)\n}\n\n/**\n * Returns a range from
this value up to but excluding the specified [to] value.\n * \n * If the [to] value is less than or equal to `this`
value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UByte.until(to: UByte): UIntRange {\n  if (to <= UByte.MIN_VALUE) return UIntRange.EMPTY\n  return
this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to]
value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun UInt.until(to:
UInt): UIntRange {\n  if (to <= UInt.MIN_VALUE) return UIntRange.EMPTY\n  return this .. (to -
1u).toUInt()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to] value.\n * \n * If the
[to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
ULong.until(to: ULong): ULongRange {\n  if (to <= ULong.MIN_VALUE) return ULongRange.EMPTY\n  return
this .. (to - 1u).toULong()\n}\n\n/**\n * Returns a range from this value up to but excluding the specified [to]
value.\n * \n * If the [to] value is less than or equal to `this` value, then the returned range is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic infix fun
UShort.until(to: UShort): UIntRange {\n  if (to <= UShort.MIN_VALUE) return UIntRange.EMPTY\n  return
this.toUInt() .. (to - 1u).toUInt()\n}\n\n/**\n * Ensures that this value is not less than the specified
[minimumValue].\n * \n * @return this value if it's greater than or equal to the [minimumValue] or the
[minimumValue] otherwise.\n * \n * @sample samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceAtLeast(minimumValue: UInt): UInt {\n  return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceAtLeast(minimumValue: ULong): ULong {\n  return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample

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samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UByte.coerceAtLeast(minimumValue: UByte): UByte {\n    return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not less than the specified [minimumValue].\n * \n * @return this value
if it's greater than or equal to the [minimumValue] or the [minimumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtLeastUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceAtLeast(minimumValue: UShort): UShort {\n    return if (this < minimumValue) minimumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceAtMost(maximumValue: UInt): UInt {\n    return if (this > maximumValue) maximumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceAtMost(maximumValue: ULong): ULong {\n    return if (this > maximumValue) maximumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UByte.coerceAtMost(maximumValue: UByte): UByte {\n    return if (this > maximumValue) maximumValue else
this\n}\n\n/**\n * Ensures that this value is not greater than the specified [maximumValue].\n * \n * @return this
value if it's less than or equal to the [maximumValue] or the [maximumValue] otherwise.\n * \n * @sample
samples.comparisons.ComparableOps.coerceAtMostUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceAtMost(maximumValue: UShort): UShort {\n    return if (this > maximumValue) maximumValue
else this\n}\n\n/**\n * Ensures that this value lies in the specified range [minimumValue]..[maximumValue].\n * \n
* @return this value if it's in the range, or [minimumValue] if this value is less than [minimumValue], or
[maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceIn(minimumValue: UInt, maximumValue: UInt): UInt {\n    if (minimumValue > maximumValue)
throw IllegalArgumentException("Cannot coerce value to an empty range: maximum $maximumValue is less than
minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n    if (this > maximumValue)
return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the specified range
[minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or [minimumValue] if this value
is less than [minimumValue], or [maximumValue] if this value is greater than [maximumValue].\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceIn(minimumValue: ULong, maximumValue: ULong): ULong {\n    if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n    if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n    return this\n}\n\n/**\n * Ensures that this value lies in the
specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or
[minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n

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*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UByte.coerceIn(minimumValue: UByte, maximumValue: UByte): UByte {\n if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the
specified range [minimumValue]..[maximumValue].\n * \n * @return this value if it's in the range, or
[minimumValue] if this value is less than [minimumValue], or [maximumValue] if this value is greater than
[maximumValue].\n * \n * @sample samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UShort.coerceIn(minimumValue: UShort, maximumValue: UShort): UShort {\n if (minimumValue >
maximumValue) throw IllegalArgumentException("Cannot coerce value to an empty range: maximum
$maximumValue is less than minimum $minimumValue.")\n if (this < minimumValue) return minimumValue\n
if (this > maximumValue) return maximumValue\n return this\n}\n\n/**\n * Ensures that this value lies in the
specified [range].\n * \n * @return this value if it's in the [range], or `range.start` if this value is less than
`range.start`, or `range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
UInt.coerceIn(range: ClosedRange<UInt>): UInt {\n if (range is ClosedFloatingPointRange) {\n return
this.coerceIn<UInt>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value to
an empty range: $range.")\n return when {\n this < range.start -> range.start\n this > range.endInclusive -
-> range.endInclusive\n else -> this\n }\n}\n\n/**\n * Ensures that this value lies in the specified [range].\n * \n
* @return this value if it's in the [range], or `range.start` if this value is less than `range.start`, or
`range.endInclusive` if this value is greater than `range.endInclusive`.\n * \n * @sample
samples.comparisons.ComparableOps.coerceInUnsigned\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
ULong.coerceIn(range: ClosedRange<ULong>): ULong {\n if (range is ClosedFloatingPointRange) {\n return
this.coerceIn<ULong>(range)\n }\n if (range.isEmpty()) throw IllegalArgumentException("Cannot coerce value
to an empty range: $range.")\n return when {\n this < range.start -> range.start\n this >
range.endInclusive -> range.endInclusive\n else -> this\n }\n}\n\n"/**\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("USequencesKt")\n\npackage
kotlin.sequences\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\nimport kotlin.random.*\n\n/**\n * Returns the
sum of all elements in the sequence.\n * \n * The operation is _terminal_.\n
*\n@kotlin.jvm.JvmName("sumOfUInt")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedT
ypes::class)\npublic fun Sequence<UInt>.sum(): UInt {\n var sum: UInt = 0u\n for (element in this) {\n sum
+= element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n * \n * The
operation is _terminal_.\n
*\n@kotlin.jvm.JvmName("sumOfULong")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Sequence<ULong>.sum(): ULong {\n var sum: ULong = 0uL\n for (element in this)
{\n sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n * \n *
The operation is _terminal_.\n
*\n@kotlin.jvm.JvmName("sumOfUByte")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned
Types::class)\npublic fun Sequence<UByte>.sum(): UInt {\n var sum: UInt = 0u\n for (element in this) {\n
sum += element\n }\n return sum\n}\n\n/**\n * Returns the sum of all elements in the sequence.\n * \n * The
operation is _terminal_.\n
*\n@kotlin.jvm.JvmName("sumOfUShort")\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsigned

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Types::class\npublic fun Sequence<UShort>.sum(): UInt {\n    var sum: UInt = 0u\n    for (element in this) {\n        sum += element\n    }\n    return sum\n}\n\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n\npublic expect open class Error : Throwable {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class Exception : Throwable {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class RuntimeException : Exception {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class IllegalArgumentException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class IllegalStateException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class IndexOutOfBoundsException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n}\n\n\npublic expect open class ConcurrentModificationException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    @Deprecated("The constructor is not supported on all platforms and will be removed from kotlin-stdlib-common soon.", level = DeprecationLevel.ERROR)\n    constructor(message: String?, cause: Throwable?)\n    @Deprecated("The constructor is not supported on all platforms and will be removed from kotlin-stdlib-common soon.", level = DeprecationLevel.ERROR)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class UnsupportedOperationException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\npublic expect open class NumberFormatException : IllegalArgumentException {\n    constructor()\n    constructor(message: String?)\n}\n\n\npublic expect open class NullPointerException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n}\n\n\npublic expect open class ClassCastException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n}\n\n\npublic expect open class AssertionError : Error {\n    constructor()\n    constructor(message: Any?)\n}\n\n\npublic expect open class NoSuchElementException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n}\n\n\n@SinceKotlin("1.3")\npublic expect open class ArithmeticException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n}\n\n\n@Deprecated("This exception type is not supposed to be thrown or caught in common code and will be removed from kotlin-stdlib-common soon.", level = DeprecationLevel.ERROR)\npublic expect open class NoWhenBranchMatchedException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\n@Deprecated("This exception type is not supposed to be thrown or caught in common code and will be removed from kotlin-stdlib-common soon.", level = DeprecationLevel.ERROR)\npublic expect class UninitializedPropertyAccessException : RuntimeException {\n    constructor()\n    constructor(message: String?)\n    constructor(message: String?, cause: Throwable?)\n    constructor(cause: Throwable?)\n}\n\n\n/**\n * Thrown after invocation of a function or property that was expected to return `Nothing`, but returned something instead.\n *\n */\n@SinceKotlin("1.4")\n@PublishedApi\ninternal class KotlinNothingValueException : RuntimeException {\n    constructor() : super()\n    constructor(message: String?) : super(message)\n    constructor(message: String?, cause: Throwable?) : super(message, cause)\n    constructor(cause: Throwable?) : super(cause)\n}\n\n\n/**\n * Returns the detailed description of this throwable with its stack trace.\n *\n * The detailed description includes:\n * - the short description (see [Throwable.toString]) of this throwable;\n * - the complete stack trace;\n * - detailed descriptions of the exceptions that were [suppressed][suppressedExceptions] in order to deliver this exception;\n * - the detailed description of each throwable in the [Throwable.cause] chain.\n *\n */\n@SinceKotlin("1.4")\npublic expect fun Throwable.stackTraceToString(): String\n\n\n/**\n * Prints the [detailed description][Throwable.stackTraceToString] of this throwable to the standard output or standard error output.\n *\n */\n@SinceKotlin("1.4")\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\npublic expect fun

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Throwable.printStackTrace(): Unit\n\n/\*\*\n \* When supported by the platform, adds the specified exception to the list of exceptions that were\n \* suppressed in order to deliver this exception.\n

\*\n@SinceKotlin("1.4")\n@Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER")\npublic expect fun Throwable.addSuppressed(exception: Throwable)\n\n/\*\*\n \* Returns a list of all exceptions that were suppressed in order to deliver this exception.\n \* The list can be empty;\n \* - if no exceptions were suppressed;\n \* - if the platform doesn't support suppressed exceptions;\n \* - if this [Throwable] instance has disabled the suppression.\n

\*\n@SinceKotlin("1.4")\npublic expect val Throwable.suppressedExceptions: List<Throwable>\n","/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n\npackage kotlin.js\nimport kotlin.annotation.AnnotationTarget.\*\n\n/\*\*\n \* Gives a declaration (a function, a property or a class) specific name in JavaScript.\n \*\n@Target(CLASS, FUNCTION, PROPERTY, CONSTRUCTOR, PROPERTY\_GETTER, PROPERTY\_SETTER)\n@OptionalExpectation\npublic expect annotation class JsName(val name: String)\n\n/\*\*\n \* Marks experimental JS export annotations.\n \* Note that behavior of these annotations will likely be changed in the future.\n \* Usages of such annotations will be reported as warnings unless an explicit opt-in with\n \* the [OptIn] annotation, e.g. `@OptIn(ExperimentalJsExport::class)`,\n \* or with the `-Xopt-in=kotlin.js.ExperimentalJsExport` compiler option is given.\n

\*\n@Suppress("DEPRECATION")\n@Experimental(level = Experimental.Level.WARNING)\n@RequiresOptIn(level = RequiresOptIn.Level.WARNING)\n@MustBeDocumented\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.4")\npublic annotation class ExperimentalJsExport\n\n/\*\*\n \* Exports top-level declaration on JS platform.\n \* Compiled module exposes declarations that are marked with this annotation without name mangling.\n \* This annotation can be applied to either files or top-level declarations.\n \* It is currently prohibited to export the following kinds of declarations:\n \* \* `expect` declarations\n \* \* inline functions with reified type parameters\n \* \* suspend functions\n \* \* secondary constructors without `@JsName`\n \* \* extension properties\n \* \* enum classes\n \* \* annotation classes\n \* Signatures of exported declarations must only contain "exportable" types:\n \* \* `dynamic`, `Any`, `String`, `Boolean`, `Byte`, `Short`, `Int`, `Float`, `Double`\n \* \* `BooleanArray`, `ByteArray`, `ShortArray`, `IntArray`, `FloatArray`, `DoubleArray`\n \* \* `Array<exportable-type>`\n \* \* Function types with exportable parameters and return types\n \* \* `external` or `@JsExport` classes and interfaces\n \* \* Nullable counterparts of types above\n \* \* Unit return type. Must not be nullable\n \* This annotation is experimental, meaning that restrictions mentioned above are subject to change.\n

\*\n@ExperimentalJsExport\n@Retention(AnnotationRetention.BINARY)\n@Target(CLASS, PROPERTY, FUNCTION, FILE)\n@SinceKotlin("1.4")\n@OptionalExpectation\npublic expect annotation class JsExport(),"/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n\npackage kotlin.io\n\n/\*\*\n \* Prints the line separator to the standard output stream.\n \*\npublic expect fun println()\n\n/\*\*\n \* Prints the given [message] and the line separator to the standard output stream.\n \*\npublic expect fun println(message: Any?)\n\n/\*\*\n \* Prints the given [message] to the standard output stream.\n \*\npublic expect fun print(message: Any?)\n\n/\*\*\n \* Reads a line of input from the standard input stream and returns it,\n \* or throws a [RuntimeException] if EOF has already been reached when [readLn] is called.\n \* LF or CRLF is treated as the line terminator. Line terminator is not included in the returned string.\n \* Currently this function is not supported in Kotlin/JS and throws [UnsupportedOperationException].\n \*\n@SinceKotlin("1.6")\npublic expect fun readLn(): String\n\n/\*\*\n \* Reads a line of input from the standard input stream and returns it,\n \* or return `null` if EOF has already been reached when [readLnOrNull] is called.\n \* LF or CRLF is treated as the line terminator. Line terminator is not included in the returned string.\n \* Currently this function is not supported in Kotlin/JS and throws [UnsupportedOperationException].\n \*\n@SinceKotlin("1.6")\npublic expect fun readLnOrNull(): String?\n\ninternal class ReadAfterEOFException(message: String?) : RuntimeException(message)\n\ninternal expect interface Serializable\n","/\*\n \* Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the

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license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\nimport kotlin.internal.PlatformDependent\n\n/**\n *
Classes that inherit from this interface can be represented as a sequence of elements that can\n * be iterated over.\n *
@param T the type of element being iterated over. The iterator is covariant in its element type.\n */\npublic interface
Iterable<out T> {\n /**\n * Returns an iterator over the elements of this object.\n */\n public operator fun
iterator(): Iterator<T>}\n\n/**\n * Classes that inherit from this interface can be represented as a sequence of
elements that can\n * be iterated over and that supports removing elements during iteration.\n * @param T the type
of element being iterated over. The mutable iterator is invariant in its element type.\n */\npublic interface
MutableIterable<out T> : Iterable<T> {\n /**\n * Returns an iterator over the elements of this sequence that
supports removing elements during iteration.\n */\n override fun iterator(): MutableIterator<T>}\n\n/**\n * A
generic collection of elements. Methods in this interface support only read-only access to the collection;\n *
read/write access is supported through the [MutableCollection] interface.\n * @param E the type of elements
contained in the collection. The collection is covariant in its element type.\n */\npublic interface Collection<out E> :
Iterable<E> {\n // Query Operations\n /**\n * Returns the size of the collection.\n */\n public val size:
Int\n\n /**\n * Returns `true` if the collection is empty (contains no elements), `false` otherwise.\n */\n
public fun isEmpty(): Boolean\n\n /**\n * Checks if the specified element is contained in this collection.\n */\n
public operator fun contains(element: @UnsafeVariance E): Boolean\n\n override fun iterator():
Iterator<E>\n\n // Bulk Operations\n /**\n * Checks if all elements in the specified collection are contained in
this collection.\n */\n public fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean}\n\n/**\n * A
generic collection of elements that supports adding and removing elements.\n */\n * @param E the type of
elements contained in the collection. The mutable collection is invariant in its element type.\n */\npublic interface
MutableCollection<E> : Collection<E>, MutableIterable<E> {\n // Query Operations\n override fun iterator():
MutableIterator<E>\n\n // Modification Operations\n /**\n * Adds the specified element to the collection.\n */\n
*\n * @return `true` if the element has been added, `false` if the collection does not support duplicates\n * and
the element is already contained in the collection.\n */\n public fun add(element: E): Boolean\n\n /**\n *
Removes a single instance of the specified element from this\n * collection, if it is present.\n */\n * @return
`true` if the element has been successfully removed; `false` if it was not present in the collection.\n */\n
public fun remove(element: E): Boolean\n\n // Bulk Modification Operations\n /**\n * Adds all of the elements of
the specified collection to this collection.\n */\n * @return `true` if any of the specified elements was added to
the collection, `false` if the collection was not modified.\n */\n public fun addAll(elements: Collection<E>):
Boolean\n\n /**\n * Removes all of this collection's elements that are also contained in the specified
collection.\n */\n * @return `true` if any of the specified elements was removed from the collection, `false` if
the collection was not modified.\n */\n public fun removeAll(elements: Collection<E>): Boolean\n\n /**\n *
Retains only the elements in this collection that are contained in the specified collection.\n */\n * @return
`true` if any element was removed from the collection, `false` if the collection was not modified.\n */\n
public fun retainAll(elements: Collection<E>): Boolean\n\n /**\n * Removes all elements from this collection.\n */\n
public fun clear(): Unit}\n\n/**\n * A generic ordered collection of elements. Methods in this interface
support only read-only access to the list;\n * read/write access is supported through the [MutableList] interface.\n *
@param E the type of elements contained in the list. The list is covariant in its element type.\n */\npublic interface
List<out E> : Collection<E> {\n // Query Operations\n\n override val size: Int\n override fun isEmpty():
Boolean\n\n override fun contains(element: @UnsafeVariance E): Boolean\n\n override fun iterator():
Iterator<E>\n\n // Bulk Operations\n\n override fun containsAll(elements: Collection<@UnsafeVariance E>):
Boolean\n\n // Positional Access Operations\n /**\n * Returns the element at the specified index in the list.\n */\n
*\n */\n public operator fun get(index: Int): E\n\n // Search Operations\n /**\n * Returns the index of the first
occurrence of the specified element in the list, or -1 if the specified\n * element is not contained in the list.\n */\n
*\n */\n public fun indexOf(element: @UnsafeVariance E): Int\n\n /**\n * Returns the index of the last
occurrence of the specified element in the list, or -1 if the specified\n * element is not contained in the list.\n */\n
*\n */\n public fun lastIndexOf(element: @UnsafeVariance E): Int\n\n // List Iterators\n /**\n * Returns a list
iterator over the elements in this list (in proper sequence).\n */\n */\n public fun listIterator(): ListIterator<E>}\n

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/**\n * Returns a list iterator over the elements in this list (in proper sequence), starting at the specified [index].\n
*\n public fun listIterator(index: Int): ListIterator<E>\n // View\n /**\n * Returns a view of the portion
of this list between the specified [fromIndex] (inclusive) and [toIndex] (exclusive).\n * The returned list is backed
by this list, so non-structural changes in the returned list are reflected in this list, and vice-versa.\n *\n *
Structural changes in the base list make the behavior of the view undefined.\n */\n public fun
subList(fromIndex: Int, toIndex: Int): List<E>\n}\n\n/**\n * A generic ordered collection of elements that supports
adding and removing elements.\n * @param E the type of elements contained in the list. The mutable list is invariant
in its element type.\n */\n public interface MutableList<E> : List<E>, MutableCollection<E> {\n // Modification
Operations\n /**\n * Adds the specified element to the end of this list.\n *\n * @return `true` because the
list is always modified as the result of this operation.\n */\n override fun add(element: E): Boolean\n\n
override fun remove(element: E): Boolean\n\n // Bulk Modification Operations\n /**\n * Adds all of the
elements of the specified collection to the end of this list.\n *\n * The elements are appended in the order they
appear in the [elements] collection.\n *\n * @return `true` if the list was changed as the result of the
operation.\n */\n override fun addAll(elements: Collection<E>): Boolean\n\n /**\n * Inserts all of the
elements of the specified collection [elements] into this list at the specified [index].\n *\n * @return `true` if the
list was changed as the result of the operation.\n */\n public fun addAll(index: Int, elements: Collection<E>):
Boolean\n\n override fun removeAll(elements: Collection<E>): Boolean\n\n override fun retainAll(elements:
Collection<E>): Boolean\n\n override fun clear(): Unit\n\n // Positional Access Operations\n /**\n * Replaces
the element at the specified position in this list with the specified element.\n *\n * @return the element
previously at the specified position.\n */\n public operator fun set(index: Int, element: E): E\n\n /**\n *
Inserts an element into the list at the specified [index].\n */\n public fun add(index: Int, element: E): Unit\n\n
/**\n * Removes an element at the specified [index] from the list.\n *\n * @return the element that has been
removed.\n */\n public fun removeAt(index: Int): E\n\n // List Iterators\n override fun listIterator():
MutableListIterator<E>\n\n override fun listIterator(index: Int): MutableListIterator<E>\n\n // View\n override
fun subList(fromIndex: Int, toIndex: Int): MutableList<E>\n}\n\n/**\n * A generic unordered collection of elements
that does not support duplicate elements.\n * Methods in this interface support only read-only access to the set;\n *
read/write access is supported through the [MutableSet] interface.\n * @param E the type of elements contained in
the set. The set is covariant in its element type.\n */\n public interface Set<out E> : Collection<E> {\n // Query
Operations\n\n override val size: Int\n\n override fun isEmpty(): Boolean\n\n override fun contains(element:
@UnsafeVariance E): Boolean\n\n override fun iterator(): Iterator<E>\n\n // Bulk Operations\n\n override fun
containsAll(elements: Collection<@UnsafeVariance E>): Boolean\n}\n\n\n/**\n * A generic unordered collection of
elements that does not support duplicate elements, and supports\n * adding and removing elements.\n * @param E
the type of elements contained in the set. The mutable set is invariant in its element type.\n */\n public interface
MutableSet<E> : Set<E>, MutableCollection<E> {\n // Query Operations\n\n override fun iterator():
MutableIterator<E>\n\n // Modification Operations\n\n /**\n * Adds the specified element to the set.\n *\n *
@return `true` if the element has been added, `false` if the element is already contained in the set.\n */\n\n
override fun add(element: E): Boolean\n\n override fun remove(element: E): Boolean\n\n // Bulk Modification
Operations\n\n override fun addAll(elements: Collection<E>): Boolean\n\n override fun removeAll(elements:
Collection<E>): Boolean\n\n override fun retainAll(elements: Collection<E>): Boolean\n\n override fun clear():
Unit\n}\n\n\n/**\n * A collection that holds pairs of objects (keys and values) and supports efficiently retrieving\n *
the value corresponding to each key. Map keys are unique; the map holds only one value for each key.\n * Methods
in this interface support only read-only access to the map; read-write access is supported through\n * the
[MutableMap] interface.\n * @param K the type of map keys. The map is invariant in its key type, as it\n * can
accept key as a parameter (of [containsKey] for example) and return it in [keys] set.\n * @param V the type of map
values. The map is covariant in its value type.\n */\n public interface Map<K, out V> {\n // Query Operations\n
\n /**\n * Returns the number of key/value pairs in the map.\n */\n public val size: Int\n\n /**\n * Returns
`true` if the map is empty (contains no elements), `false` otherwise.\n */\n public fun isEmpty(): Boolean\n\n
/**\n * Returns `true` if the map contains the specified [key].\n */\n public fun containsKey(key: K):

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Boolean\n\n /**\n * Returns `true` if the map maps one or more keys to the specified [value].\n *\n public
fun containsValue(value: @UnsafeVariance V): Boolean\n\n /**\n * Returns the value corresponding to the
given [key], or `null` if such a key is not present in the map.\n *\n public operator fun get(key: K): V?\n\n
/**\n * Returns the value corresponding to the given [key], or [defaultValue] if such a key is not present in the
map.\n *\n * @since JDK 1.8\n *\n @SinceKotlin("1.1")\n @PlatformDependent\n public fun
getOrDefault(key: K, defaultValue: @UnsafeVariance V): V {\n // See default implementation in JDK
sources\n throw NotImplementedError()\n }\n\n // Views\n /**\n * Returns a read-only [Set] of all keys
in this map.\n *\n public val keys: Set<K>\n\n /**\n * Returns a read-only [Collection] of all values in this
map. Note that this collection may contain duplicate values.\n *\n public val values: Collection<V>\n\n /**\n
* Returns a read-only [Set] of all key/value pairs in this map.\n *\n public val entries: Set<Map.Entry<K,
V>>\n\n /**\n * Represents a key/value pair held by a [Map].\n *\n public interface Entry<out K, out V>
{\n /**\n * Returns the key of this key/value pair.\n *\n public val key: K\n\n /**\n *
Returns the value of this key/value pair.\n *\n public val value: V\n }\n\n /**\n * A modifiable
collection that holds pairs of objects (keys and values) and supports efficiently retrieving\n * the value
corresponding to each key. Map keys are unique; the map holds only one value for each key.\n * @param K the type
of map keys. The map is invariant in its key type.\n * @param V the type of map values. The mutable map is
invariant in its value type.\n *\n public interface MutableMap<K, V> : Map<K, V> {\n // Modification
Operations\n /**\n * Associates the specified [value] with the specified [key] in the map.\n *\n * @return
the previous value associated with the key, or `null` if the key was not present in the map.\n *\n public fun
put(key: K, value: V): V?\n\n /**\n * Removes the specified key and its corresponding value from this map.\n
*\n * @return the previous value associated with the key, or `null` if the key was not present in the map.\n *\n
public fun remove(key: K): V?\n\n /**\n * Removes the entry for the specified key only if it is mapped to the
specified value.\n *\n * @return true if entry was removed\n *\n @SinceKotlin("1.1")\n
@PlatformDependent\n public fun remove(key: K, value: V): Boolean {\n // See default implementation in
JDK sources\n return true\n }\n\n // Bulk Modification Operations\n /**\n * Updates this map with
key/value pairs from the specified map [from].\n *\n public fun putAll(from: Map<out K, V>): Unit\n\n /**\n
* Removes all elements from this map.\n *\n public fun clear(): Unit\n\n // Views\n /**\n * Returns a
[MutableSet] of all keys in this map.\n *\n override val keys: MutableSet<K>\n\n /**\n * Returns a
[MutableCollection] of all values in this map. Note that this collection may contain duplicate values.\n *\n
override val values: MutableCollection<V>\n\n /**\n * Returns a [MutableSet] of all key/value pairs in this
map.\n *\n override val entries: MutableSet<MutableMap.MutableEntry<K, V>>\n\n /**\n * Represents a
key/value pair held by a [MutableMap].\n *\n public interface MutableEntry<K, V> : Map.Entry<K, V> {\n
/**\n * Changes the value associated with the key of this entry.\n *\n * @return the previous value
corresponding to the key.\n *\n public fun setValue(newValue: V): V\n }\n\n /* Copyright 2010-
2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n // Auto-generated file. DO NOT
EDIT!\n\n package kotlin.collections\n\n /** An iterator over a sequence of values of type `Byte`. *\n public abstract
class ByteIterator : Iterator<Byte> {\n override final fun next() = nextByte()\n\n /** Returns the next value in
the sequence without boxing. *\n public abstract fun nextByte(): Byte\n\n /** An iterator over a sequence of
values of type `Char`. *\n public abstract class CharIterator : Iterator<Char> {\n override final fun next() =
nextChar()\n\n /** Returns the next value in the sequence without boxing. *\n public abstract fun nextChar():
Char\n\n /** An iterator over a sequence of values of type `Short`. *\n public abstract class ShortIterator :
Iterator<Short> {\n override final fun next() = nextShort()\n\n /** Returns the next value in the sequence without
boxing. *\n public abstract fun nextShort(): Short\n\n /** An iterator over a sequence of values of type `Int`.
*\n public abstract class IntIterator : Iterator<Int> {\n override final fun next() = nextInt()\n\n /** Returns the
next value in the sequence without boxing. *\n public abstract fun nextInt(): Int\n\n /** An iterator over a
sequence of values of type `Long`. *\n public abstract class LongIterator : Iterator<Long> {\n override final fun
next() = nextLong()\n\n /** Returns the next value in the sequence without boxing. *\n public abstract fun

```



```

step})\n\n companion object {\n    /**\n     * Creates CharProgression within the specified bounds of a
closed range.\n     *\n     * The progression starts with the [rangeStart] value and goes toward the [rangeEnd]
value not excluding it, with the specified [step].\n     *\n     * In order to go backwards the [step] must be negative.\n     *\n     * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.\n     */\n    public fun
fromClosedRange(rangeStart: Char, rangeEnd: Char, step: Int): CharProgression = CharProgression(rangeStart,
rangeEnd, step)\n } \n\n /**\n * A progression of values of type `Int`.\n */\n\n public open class IntProgression\n internal constructor\n (start: Int, endInclusive: Int, step: Int\n ) : Iterable<Int> {\n
init {\n    if (step == 0) throw kotlin.IllegalArgumentException("Step must be non-zero.")\n    if (step ==
Int.MIN_VALUE) throw kotlin.IllegalArgumentException("Step must be greater than Int.MIN_VALUE to avoid
overflow on negation.")\n } \n\n /**\n * The first element in the progression.\n */\n    public val first: Int =
start\n\n /**\n * The last element in the progression.\n */\n    public val last: Int =
getProgressionLastElement(start, endInclusive, step)\n\n /**\n * The step of the progression.\n */\n    public
val step: Int = step\n\n    override fun iterator(): IntIterator = IntProgressionIterator(first, last, step)\n\n /**\n *
Checks if the progression is empty.\n     *\n     * Progression with a positive step is empty if its first element is
greater than the last element.\n     *\n     * Progression with a negative step is empty if its first element is less than the last
element.\n     */\n    public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n    override fun
equals(other: Any?): Boolean =\n        other is IntProgression && (isEmpty() && other.isEmpty() ||\n            first ==
other.first && last == other.last && step == other.step)\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1
else (31 * (31 * first + last) + step)\n\n    override fun toString(): String = if (step > 0) "$first..$last step $step" else
"$first downTo $last step $(-step)"\n\n companion object {\n    /**\n     * Creates IntProgression within the
specified bounds of a closed range.\n     *\n     * The progression starts with the [rangeStart] value and goes
toward the [rangeEnd] value not excluding it, with the specified [step].\n     *\n     * In order to go backwards the [step]
must be negative.\n     *\n     * [step] must be greater than `Int.MIN_VALUE` and not equal to zero.\n     */\n    public fun
fromClosedRange(rangeStart: Int, rangeEnd: Int, step: Int): IntProgression =
IntProgression(rangeStart, rangeEnd, step)\n } \n\n /**\n * A progression of values of type `Long`.\n */\n\n public open class LongProgression\n internal constructor\n (start: Long, endInclusive: Long,
step: Long\n ) : Iterable<Long> {\n
init {\n    if (step == 0L) throw kotlin.IllegalArgumentException("Step
must be non-zero.")\n    if (step == Long.MIN_VALUE) throw kotlin.IllegalArgumentException("Step must be
greater than Long.MIN_VALUE to avoid overflow on negation.")\n } \n\n /**\n * The first element in the
progression.\n */\n    public val first: Long = start\n\n /**\n * The last element in the progression.\n */\n    public
val last: Long = getProgressionLastElement(start, endInclusive, step)\n\n /**\n * The step of the
progression.\n */\n    public val step: Long = step\n\n    override fun iterator(): LongIterator =
LongProgressionIterator(first, last, step)\n\n /**\n * Checks if the progression is empty.\n     *\n     *
Progression with a positive step is empty if its first element is greater than the last element.\n     *\n     * Progression with a
negative step is empty if its first element is less than the last element.\n     */\n    public open fun isEmpty(): Boolean
= if (step > 0) first > last else first < last\n\n    override fun equals(other: Any?): Boolean =\n        other is
LongProgression && (isEmpty() && other.isEmpty() ||\n            first == other.first && last == other.last && step ==
other.step)\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (31 * (first xor (first ushr 32)) +
(last xor (last ushr 32))) + (step xor (step ushr 32))).toInt()\n\n    override fun toString(): String = if (step > 0)
"$first..$last step $step" else "$first downTo $last step $(-step)"\n\n companion object {\n    /**\n     *
Creates LongProgression within the specified bounds of a closed range.\n     *\n     * The progression starts
with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n     *\n     *
In order to go backwards the [step] must be negative.\n     *\n     * [step] must be greater than
`Long.MIN_VALUE` and not equal to zero.\n     */\n    public fun fromClosedRange(rangeStart: Long,
rangeEnd: Long, step: Long): LongProgression = LongProgression(rangeStart, rangeEnd, step)\n } \n\n /**\n *
Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n     * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n     */\n\n package
kotlin.ranges\n\n /**\n * Represents a range of values (for example, numbers or characters).\n     * See the [Kotlin

```

language documentation](https://kotlinlang.org/docs/reference/ranges.html) for more information.

```

public interface ClosedRange<T: Comparable<T>> {
    /** The minimum value in the range. */
    public val start: T
    /** The maximum value in the range (inclusive). */
    public val endInclusive: T
    /** Checks whether the specified [value] belongs to the range. */
    public operator fun contains(value: T): Boolean = value >= start && value <= endInclusive
    /** Checks whether the range is empty. */
    /** The range is empty if its start value is greater than the end value. */
    public fun isEmpty(): Boolean = start > endInclusive
}

```

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```

package kotlin
/** The type with only one value: the `Unit` object. This type corresponds to the `void` type in Java. */
public object Unit {
    override fun toString() = "kotlin.Unit"
}

```

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```

package kotlin.annotation
import kotlin.annotation.AnnotationTarget
/** Contains the list of code elements which are the possible annotation targets */
public enum class AnnotationTarget {
    /** Class, interface or object, annotation class is also included */
    CLASS,
    /** Annotation class only */
    ANNOTATION_CLASS,
    /** Generic type parameter */
    TYPE_PARAMETER,
    /** Property */
    PROPERTY,
    /** Field, including property's backing field */
    FIELD,
    /** Local variable */
    LOCAL_VARIABLE,
    /** Value parameter of a function or a constructor */
    VALUE_PARAMETER,
    /** Constructor only (primary or secondary) */
    CONSTRUCTOR,
    /** Function (constructors are not included) */
    FUNCTION,
    /** Property getter only */
    PROPERTY_GETTER,
    /** Property setter only */
    PROPERTY_SETTER,
    /** Type usage */
    TYPE,
    /** Any expression */
    EXPRESSION,
    /** File */
    FILE,
    /** Type alias */
    TYPEALIAS
}
/** Contains the list of possible annotation's retentions. */
/** Determines how an annotation is stored in binary output. */
public enum class AnnotationRetention {
    /** Annotation isn't stored in binary output */
    SOURCE,
    /** Annotation is stored in binary output, but invisible for reflection */
    BINARY,
    /** Annotation is stored in binary output and visible for reflection (default retention) */
    RUNTIME
}
/** This meta-annotation indicates the kinds of code elements which are possible targets of an annotation. */
/** If the target meta-annotation is not present on an annotation declaration, the annotation is applicable to the following elements: [CLASS], [PROPERTY], [FIELD], [LOCAL_VARIABLE], [VALUE_PARAMETER], [CONSTRUCTOR], [FUNCTION], [PROPERTY_GETTER], [PROPERTY_SETTER]. */
/** @property allowedTargets list of allowed annotation targets */
@Target(AnnotationTarget.ANNOTATION_CLASS)
@MustBeDocumented
public annotation class Target(vararg val allowedTargets: AnnotationTarget)
/** This meta-annotation determines whether an annotation is stored in binary output and visible for reflection. By default, both are true. */
/** @property value necessary annotation retention (RUNTIME, BINARY or SOURCE) */
@Target(AnnotationTarget.ANNOTATION_CLASS)
public annotation class Retention(val value: AnnotationRetention = AnnotationRetention.RUNTIME)
/** This meta-annotation determines that an annotation is applicable twice or more on a single code element */
@Target(AnnotationTarget.ANNOTATION_CLASS)
public annotation class Repeatable
/** This meta-annotation determines that an annotation is a part of public API and therefore should be included in the generated documentation for the element to which the annotation is applied. */

```

```

*/\n@Target(AnnotationTarget.ANNOTATION_CLASS)\npublic annotation class MustBeDocumented\n"/\n *
Copyright 2010-2016 JetBrains s.r.o.\n * Licensed under the Apache License, Version 2.0 (the "License");\n *
you may not use this file except in compliance with the License.\n * You may obtain a copy of the License at\n *
http://www.apache.org/licenses/LICENSE-2.0\n * Unless required by applicable law or agreed to in writing,
software\n * distributed under the License is distributed on an "AS IS" BASIS,\n * WITHOUT WARRANTIES
OR CONDITIONS OF ANY KIND, either express or implied.\n * See the License for the specific language
governing permissions and\n * limitations under the License.\n */\n\npackage kotlin.internal\n\n/**\n * Specifies
that the corresponding type parameter is not used for unsafe operations such as casts or 'is' checks\n * That means
it's completely safe to use generic types as argument for such parameter.\n
*/\n@Target(AnnotationTarget.TYPE_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\n\ninternal
annotation class PureReifiable\n\n/**\n * Specifies that the corresponding built-in method exists depending on
platform.\n * Current implementation for JVM looks whether method with same JVM descriptor exists in the
module JDK.\n * For example MutableMap.remove(K, V) available only if corresponding\n * method
'java/util/Map.remove(Ljava/lang/Object;Ljava/lang/Object;)Z' is defined in JDK (i.e. for major versions >= 8)\n
*/\n@Target(AnnotationTarget.FUNCTION)\n@Retention(AnnotationRetention.BINARY)\n\ninternal annotation
class PlatformDependent\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.internal\n\n// a mod b (in arithmetical sense)\n\nprivate fun mod(a:
Int, b: Int): Int {\n    val mod = a % b\n    return if (mod >= 0) mod else mod + b\n}\n\nprivate fun mod(a: Long, b:
Long): Long {\n    val mod = a % b\n    return if (mod >= 0) mod else mod + b\n}\n\n// (a - b) mod c\n\nprivate fun
differenceModulo(a: Int, b: Int, c: Int): Int {\n    return mod(mod(a, c) - mod(b, c), c)\n}\n\nprivate fun
differenceModulo(a: Long, b: Long, c: Long): Long {\n    return mod(mod(a, c) - mod(b, c), c)\n}\n\n/**\n *
Calculates the final element of a bounded arithmetic progression, i.e. the last element of the progression which is in
the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in case of a negative\n *
[step].\n * No validation on passed parameters is performed. The given parameters should satisfy the
condition:\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n * @param start
first element of the progression\n * @param end ending bound for the progression\n * @param step increment, or
difference of successive elements in the progression\n * @return the final element of the progression\n *
@suppress\n */\n@PublishedApi\n\ninternal fun getProgressionLastElement(start: Int, end: Int, step: Int): Int = when
{\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n    step < 0 -> if (start <= end)
end else end + differenceModulo(start, end, -step)\n    else -> throw kotlin.IllegalArgumentException("Step is
zero.")\n}\n\n/**\n * Calculates the final element of a bounded arithmetic progression, i.e. the last element of the
progression which is in the range\n * from [start] to [end] in case of a positive [step], or from [end] to [start] in
case of a negative\n * [step].\n * No validation on passed parameters is performed. The given parameters should
satisfy the condition:\n * - either `step > 0` and `start <= end`,\n * - or `step < 0` and `start >= end`.\n * @param
start first element of the progression\n * @param end ending bound for the progression\n * @param step
increment, or difference of successive elements in the progression\n * @return the final element of the progression\n
* @suppress\n */\n@PublishedApi\n\ninternal fun getProgressionLastElement(start: Long, end: Long, step: Long):
Long = when {\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step)\n    step < 0 -> if
(start <= end) end else end + differenceModulo(start, end, -step)\n    else -> throw
kotlin.IllegalArgumentException("Step is zero.")\n}\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n@JsName("arrayIterator")\n\ninternal fun arrayIterator(array:
dynamic, type: String?) = when (type) {\n    null -> {\n        val arr: Array<dynamic> = array\n        object :
Iterator<dynamic> {\n            var index = 0\n            override fun hasNext() = index < arr.size\n            override fun
next() = if (index < arr.size) arr[index++] else throw NoSuchElementException("$index")\n        }\n    }\n    "BooleanArray" -> booleanArrayIterator(array)\n    "ByteArray" -> byteArrayIterator(array)\n    "ShortArray" -
> shortArrayIterator(array)\n    "CharArray" -> charArrayIterator(array)\n    "IntArray" ->

```

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intArrayIterator(array)\n  \"LongArray\" -> longArrayIterator(array)\n  \"FloatArray\" ->
floatArrayIterator(array)\n  \"DoubleArray\" -> doubleArrayIterator(array)\n  else -> throw
IllegalStateException(\"Unsupported type argument for arrayIterator:
$type\")\n}\n\n@JsName(\"booleanArrayIterator\")\ninternal fun booleanArrayIterator(array: BooleanArray) =
object : BooleanIterator() {\n  var index = 0\n  override fun hasNext() = index < array.size\n  override fun
nextBoolean() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"byteArrayIterator\")\ninternal fun byteArrayIterator(array:
ByteArray) = object : ByteIterator() {\n  var index = 0\n  override fun hasNext() = index < array.size\n  override
fun nextByte() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"shortArrayIterator\")\ninternal fun
shortArrayIterator(array: ShortArray) = object : ShortIterator() {\n  var index = 0\n  override fun hasNext() =
index < array.size\n  override fun nextShort() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"charArrayIterator\")\ninternal fun charArrayIterator(array:
CharArray) = object : CharIterator() {\n  var index = 0\n  override fun hasNext() = index < array.size\n  override
fun nextChar() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"intArrayIterator\")\ninternal fun intArrayIterator(array:
IntArray) = object : IntIterator() {\n  var index = 0\n  override fun hasNext() = index < array.size\n  override fun
nextInt() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"floatArrayIterator\")\ninternal fun
floatArrayIterator(array: FloatArray) = object : FloatIterator() {\n  var index = 0\n  override fun hasNext() = index
< array.size\n  override fun nextFloat() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"doubleArrayIterator\")\ninternal fun
doubleArrayIterator(array: DoubleArray) = object : DoubleIterator() {\n  var index = 0\n  override fun hasNext()
= index < array.size\n  override fun nextDouble() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"longArrayIterator\")\ninternal fun longArrayIterator(array:
LongArray) = object : LongIterator() {\n  var index = 0\n  override fun hasNext() = index < array.size\n
override fun nextLong() = if (index < array.size) array[index++] else throw
NoSuchElementException(\"$index\")\n}\n\n@JsName(\"PropertyMetadata\")\ninternal class
PropertyMetadata(@JsName(\"callableName\") val name:
String)\n\n@JsName(\"noWhenBranchMatched\")\ninternal fun noWhenBranchMatched(): Nothing = throw
NoWhenBranchMatchedException()\n\n@JsName(\"subSequence\")\ninternal fun subSequence(c: CharSequence,
startIndex: Int, endIndex: Int): CharSequence {\n  if (c is String) {\n    return c.substring(startIndex, endIndex)\n
} else {\n    return c.asDynamic().`subSequence_vux9f0$`(startIndex, endIndex)\n
}\n}\n\n@JsName(\"captureStack\")\ninternal fun captureStack(@Suppress(\"UNUSED_PARAMETER\")
baseClass: JsClass<in Throwable>, instance: Throwable) {\n  if (js(\"Error\").captureStackTrace) {\n    // Using
uncropped stack traces due to KT-37563.\n    // Precise stack traces are implemented in JS IR compiler and
stdlib\n    js(\"Error\").captureStackTrace(instance);\n  } else {\n    instance.asDynamic().stack = js(\"new
Error()\").stack;\n  }\n}\n\n@JsName(\"newThrowable\")\ninternal fun newThrowable(message: String?, cause:
Throwable?): Throwable {\n  val throwable = js(\"new Error()\")\n  throwable.message = if (jsTypeOf(message)
== \"undefined\") {\n    if (cause != null) cause.toString() else null\n  } else {\n    message\n  }\n  throwable.cause = cause\n  throwable.name = \"Throwable\"\n  return
throwable\n}\n\n@JsName(\"BoxedChar\")\ninternal class BoxedChar(val c: Int) : Comparable<Int> {\n  override
fun equals(other: Any?): Boolean {\n    return other is BoxedChar && c == other.c\n  }\n  override fun
hashCode(): Int {\n    return c\n  }\n  override fun toString(): String {\n    return
js(\"this.c\").unsafeCast<Char>().toString()\n  }\n  override fun compareTo(other: Int): Int {\n    return
js(\"this.c - other\").unsafeCast<Int>()\n  }\n  @JsName(\"valueOf\")\n  public fun valueOf(): Int {\n
return c\n  }\n}\n\n@kotlin.internal.InlineOnly\ninternal inline fun <T> concat(args: Array<T>): T {\n  val typed
= js(\"Array\")(args.size)\n  for (i in args.indices) {\n    val arr = args[i]\n    if (arr !is Array<*>) {\n

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typed[i] = js("[]").slice.call(arr)\n    } else {\n        typed[i] = arr\n    }\n    }\n    return
js("[]").concat.apply(js("[]"), typed);\n}\n\n/** Concat regular Array's and TypedArray's into an Array.\n *\n@PublishedApi\n@JsName("arrayConcat")\n@Suppress("UNUSED_PARAMETER")\ninternal fun <T>
arrayConcat(a: T, b: T): T {\n    return concat(js("arguments"))\n}\n\n/** Concat primitive arrays. Main use:
prepare vararg arguments.\n * For compatibility with 1.1.0 the arguments may be a mixture of Array's and
TypedArray's.\n * If the first argument is TypedArray (Byte-, Short-, Char-, Int-, Float-, and DoubleArray)
returns a TypedArray, otherwise an Array.\n * If the first argument has the $type$ property (Boolean-, Char-, and
LongArray) copy its value to result.$type$.\n * If the first argument is a regular Array without the $type$ property
default to arrayConcat.\n
*\n@PublishedApi\n@JsName("primitiveArrayConcat")\n@Suppress("UNUSED_PARAMETER")\ninternal
fun <T> primitiveArrayConcat(a: T, b: T): T {\n    val args: Array<T> = js("arguments")\n    if (a is Array<*> &&
a.asDynamic().`$type$` === undefined) {\n        return concat(args)\n    } else {\n        var size = 0\n        for (i in
args.indices) {\n            size += args[i].asDynamic().length as Int\n        }\n        val result = js("new
a.constructor(size)")\n        kotlin.copyArrayType(a, result)\n        size = 0\n        for (i in args.indices) {\n            val
arr = args[i].asDynamic()\n            for (j in 0 until arr.length) {\n                result[size++] = arr[j]\n            }\n        }\n        return result\n    }\n}\n\n@JsName("booleanArrayOf")\ninternal fun booleanArrayOf() =
withType("BooleanArray", js("[]").slice.call(arguments))\n}\n\n@JsName("charArrayOf") // The arguments have
to be slice'd here because of Rhino (see KT-16974)\ninternal fun charArrayOf() = withType("CharArray", js("new
Uint16Array([]).slice.call(arguments))\n)\n\n@JsName("longArrayOf")\ninternal fun longArrayOf() =
withType("LongArray",
js("[]").slice.call(arguments))\n}\n\n@JsName("withType")\n@kotlin.internal.InlineOnly\ninternal inline fun
withType(type: String, array: dynamic): dynamic {\n    array.`$type$` = type\n    return array\n}\n\n/* Copyright
2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n *
Function corresponding to JavaScript's `typeof` operator\n
*\n@kotlin.internal.InlineOnly\n@Suppress("UNUSED_PARAMETER")\npublic inline fun jsTypeOf(a: Any?):
String = js("typeof a")\n}\n\n/* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n@file:Suppress("UNUSED_PARAMETER",
"NOTHING_TO_INLINE")\n\npackage kotlin\n\n/**\n * Returns an empty array of the specified type [T].\n
*\n@public inline fun <T> emptyArray(): Array<T> = js("[]")\n}\n\n@library\npublic fun <T> arrayOf(vararg
elements: T): Array<T> = definedExternally\n}\n\n@library\npublic fun doubleArrayOf(vararg elements: Double):
DoubleArray = definedExternally\n}\n\n@library\npublic fun floatArrayOf(vararg elements: Float): FloatArray =
definedExternally\n}\n\n@library\npublic fun longArrayOf(vararg elements: Long): LongArray =
definedExternally\n}\n\n@library\npublic fun intArrayOf(vararg elements: Int): IntArray =
definedExternally\n}\n\n@library\npublic fun charArrayOf(vararg elements: Char): CharArray =
definedExternally\n}\n\n@library\npublic fun shortArrayOf(vararg elements: Short): ShortArray =
definedExternally\n}\n\n@library\npublic fun byteArrayOf(vararg elements: Byte): ByteArray =
definedExternally\n}\n\n@library\npublic fun booleanArrayOf(vararg elements: Boolean): BooleanArray =
definedExternally\n}\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization function
[initializer].\n *\n@public actual fun <T> lazy(initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n}\n\n/**\n *
Creates a new instance of the [Lazy] that uses the specified initialization function [initializer].\n *\n * The [mode]
parameter is ignored.\n *\n@public actual fun <T> lazy(mode: LazyThreadSafetyMode, initializer: () -> T): Lazy<T> =
UnsafeLazyImpl(initializer)\n}\n\n/**\n * Creates a new instance of the [Lazy] that uses the specified initialization
function [initializer].\n *\n * The [lock] parameter is ignored.\n *\n@public actual fun <T> lazy(lock: Any?,
initializer: () -> T): Lazy<T> = UnsafeLazyImpl(initializer)\n}\n\ninternal fun fillFrom(src: dynamic, dst: dynamic):
dynamic {\n    val srcLen: Int = src.length\n    val dstLen: Int = dst.length\n    var index: Int = 0\n    while (index <
srcLen && index < dstLen) dst[index] = src[index++]\n    return dst\n}\n\ninternal fun arrayCopyResize(source:

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dynamic, newSize: Int, defaultValue: Any?): dynamic {
    val result = source.slice(0, newSize)
    copyArrayType(source, result)
    var index: Int = source.length
    if (newSize > index) {
        result.length =
        newSize
        while (index < newSize) result[index++] = defaultValue
    }
    return result
}

internal fun
<T> arrayPlusCollection(array: dynamic, collection: Collection<T>): dynamic {
    val result = array.slice()
    result.length += collection.size
    copyArrayType(array, result)
    var index: Int = array.length
    for (element in
    collection) result[index++] = element
    return result
}

internal fun <T> fillFromCollection(dst: dynamic,
startIndex: Int, collection: Collection<T>): dynamic {
    var index = startIndex
    for (element in collection)
    dst[index++] = element
    return dst
}

internal inline fun copyArrayType(from: dynamic, to: dynamic) {
    if
    (from.`$type$` !== undefined) {
        to.`$type$` = from.`$type$`
    }
}

internal inline fun jsIsType(obj:
dynamic, jsClass: dynamic) = js("Kotlin").isType(obj, jsClass)

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Kotlin Programming Language contributors.
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can be found in the license/LICENSE.txt file.
 */
package kotlin

/**
 * Creates a Char with the specified
[code].
 */
 * @sample samples.text.Chars.charFromCode

*/
@SinceKotlin("1.5")
@WasExperimental(ExperimentalStdlibApi::class)
@kotlin.internal.InlineOnly
public
actual inline fun Char(code: UShort): Char {
    return code.toInt().toChar()
}

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Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.coroutines

import
kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED

@SinceKotlin("1.3")
@JsName("CoroutineImpl")
internal
abstract class CoroutineImpl(private val resultContinuation: Continuation<Any?>) : Continuation<Any?> {
    protected var state = 0
    protected var exceptionState = 0
    protected var result: Any? = null
    protected
    var exception: Throwable? = null
    protected var finallyPath: Array<Int>? = null

    public override val context:
    CoroutineContext = resultContinuation.context

    private var intercepted_: Continuation<Any?>? = null

    public fun intercepted(): Continuation<Any?> =
        intercepted_ ?:
        (context[ContinuationInterceptor]?.interceptContinuation(this) ?: this)
        .also { intercepted_ = it }

    override fun resumeWith(result: Result<Any?>) {
        var current = this
        var currentResult: Any? =
        result.getOrNull()
        var currentException: Throwable? = result.exceptionOrNull()
        // This loop unrolls
        recursion in current.resumeWith(param) to make saner and shorter stack traces on resume
        while (true) {
            with(current) {
                val completion = resultContinuation
                // Set result and exception fields in
                the current continuation
                if (currentException == null) {
                    this.result = currentResult
                } else {
                    state = exceptionState
                    exception = currentException
                }
            }
            try {
                val outcome = doResume()
                if (outcome === COROUTINE_SUSPENDED)
                return
                currentResult = outcome
                currentException = null
            } catch (exception:
            dynamic) {
                // Catch all exceptions
                currentResult = null
                currentException =
                exception.unsafeCast<Throwable>()
            }
            releaseIntercepted() // this state machine instance is
            terminating
            if (completion is CoroutineImpl) {
                // unrolling recursion via loop
                current = completion
            } else {
                // top-level completion reached -- invoke and return
                currentException?.let {
                    completion.resumeWithException(it)
                } ?:
                completion.resume(currentResult)
                return
            }
        }
        private fun
        releaseIntercepted() {
            val intercepted = intercepted_
            if (intercepted != null && intercepted !== this) {
                context[ContinuationInterceptor]!!.releaseInterceptedContinuation(intercepted)
            }
            this.intercepted_
            = CompletedContinuation // just in case
        }
        protected abstract fun doResume(): Any?
    }

    internal object
    CompletedContinuation : Continuation<Any?> {
        override val context: CoroutineContext
        get() =
        error("This continuation is already complete")
        override fun resumeWith(result: Result<Any?>) {
            error("This continuation is already complete")
        }
        override fun toString(): String = "This continuation is
        already complete"
    }

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license/LICENSE.txt file.
 */
@file:Suppress("UNCHECKED_CAST",
"RedundantVisibilityModifier")
package kotlin

import kotlin.contracts.*
import

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kotlin.internal.InlineOnly\nimport kotlin.jvm.JvmField\nimport kotlin.jvm.JvmInline\nimport
kotlin.jvm.JvmName\n\n/**\n * A discriminated union that encapsulates a successful outcome with a value of type
[T]\n * or a failure with an arbitrary [Throwable] exception.\n *^\n@SinceKotlin("1.3")\n@JvmInline\npublic
value class Result<out T> @PublishedApi internal constructor(\n @PublishedApi\n internal val value: Any?)\n :
Serializable {\n // discovery\n\n /**\n * Returns `true` if this instance represents a successful outcome.\n *
In this case [isFailure] returns `false`.\n *^\n public val isSuccess: Boolean get() = value !is Failure\n\n /**\n
* Returns `true` if this instance represents a failed outcome.\n * In this case [isSuccess] returns `false`.\n *^\n
public val isFailure: Boolean get() = value is Failure\n\n // value & exception retrieval\n\n /**\n * Returns the
encapsulated value if this instance represents [success][Result.isSuccess] or `null`\n * if it is
[failure][Result.isFailure].\n *^\n * This function is a shorthand for `getOrElse { null }` (see [getOrElse]) or\n
* `fold(onSuccess = { it }, onFailure = { null })` (see [fold]).\n *^\n @InlineOnly\n public inline fun
getOrNull(): T? =\n when {\n isFailure -> null\n else -> value as T\n }\n\n /**\n *
Returns the encapsulated [Throwable] exception if this instance represents [failure][isFailure] or `null`\n * if it is
[success][isSuccess].\n *^\n * This function is a shorthand for `fold(onSuccess = { null }, onFailure = { it })`
(see [fold]).\n *^\n public fun exceptionOrNull(): Throwable? =\n when (value) {\n is Failure ->
value.exception\n else -> null\n }\n\n /**\n * Returns a string `Success(v)` if this instance represents
[success][Result.isSuccess]\n * where `v` is a string representation of the value or a string `Failure(x)` if\n * it
is [failure][isFailure] where `x` is a string representation of the exception.\n *^\n public override fun toString():
String =\n when (value) {\n is Failure -> value.toString() // "Failure($exception)"\n else ->
"$Success($value)"\n }\n\n // companion with constructors\n\n /**\n * Companion object for [Result]
class that contains its constructor functions\n * [success] and [failure].\n *^\n public companion object {\n
/**\n * Returns an instance that encapsulates the given [value] as successful value.\n *^\n
@Suppress("INAPPLICABLE_JVM_NAME")\n @InlineOnly\n @JvmName("success")\n public
inline fun <T> success(value: T): Result<T> =\n Result(value)\n\n /**\n * Returns an instance that
encapsulates the given [Throwable] [exception] as failure.\n *^\n
@Suppress("INAPPLICABLE_JVM_NAME")\n @InlineOnly\n @JvmName("failure")\n public
inline fun <T> failure(exception: Throwable): Result<T> =\n Result(createFailure(exception))\n }\n\n
internal class Failure(\n @JvmField\n val exception: Throwable\n ): Serializable {\n override fun
equals(other: Any?): Boolean = other is Failure && exception == other.exception\n override fun hashCode():
Int = exception.hashCode()\n override fun toString(): String = "Failure($exception)"\n }\n\n/**\n *
Creates an instance of internal marker [Result.Failure] class to\n * make sure that this class is not exposed in ABI.\n
*^\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun createFailure(exception: Throwable): Any =\n
Result.Failure(exception)\n\n/**\n * Throws exception if the result is failure. This internal function minimizes\n
* inlined bytecode for [getOrThrow] and makes sure that in the future we can\n * add some exception-augmenting
logic here (if needed).\n *^\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun Result<*>.throwOnFailure() {\n
if (value is Result.Failure) throw value.exception\n}\n\n/**\n * Calls the specified function [block] and returns its
encapsulated result if invocation was successful,\n * catching any [Throwable] exception that was thrown from the
[block] function execution and encapsulating it as a failure.\n *^\n@InlineOnly\n@SinceKotlin("1.3")\npublic
inline fun <R> runCatching(block: () -> R): Result<R> {\n return try {\n Result.success(block())\n } catch
(e: Throwable) {\n Result.failure(e)\n }\n}\n\n/**\n * Calls the specified function [block] with `this` value as
its receiver and returns its encapsulated result if invocation was successful,\n * catching any [Throwable] exception
that was thrown from the [block] function execution and encapsulating it as a failure.\n
*^\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <T, R> T.runCatching(block: T.() -> R): Result<R> {\n
return try {\n Result.success(block())\n } catch (e: Throwable) {\n Result.failure(e)\n }\n}\n\n//
extensions ---\n\n/**\n * Returns the encapsulated value if this instance represents [success][Result.isSuccess] or
throws the encapsulated [Throwable] exception\n * if it is [failure][Result.isFailure].\n *^\n * This function is a
shorthand for `getOrElse { throw it }` (see [getOrElse]).\n *^\n@InlineOnly\n@SinceKotlin("1.3")\npublic inline
fun <T> Result<T>.getOrThrow(): T {\n throwOnFailure()\n return value as T\n}\n\n/**\n * Returns the

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encapsulated value if this instance represents [success][Result.isSuccess] or the\n \* result of [onFailure] function for the encapsulated [Throwable] exception if it is [failure][Result.isFailure].\n \* Note, that this function rethrows any [Throwable] exception thrown by [onFailure] function.\n \* This function is a shorthand for `fold(onSuccess = { it }, onFailure = onFailure)` (see [fold]).\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R> Result<T>.getOrElse(onFailure: (exception: Throwable) -> R): R {\n contract {\n callsInPlace(onFailure, InvocationKind.AT_MOST_ONCE)\n }\n return when (val exception = exceptionOrNull()) {\n null -> value as T\n else -> onFailure(exception)\n }\n}\n`\n \* Returns the encapsulated value if this instance represents [success][Result.isSuccess] or the\n \* [defaultValue] if it is [failure][Result.isFailure].\n \* This function is a shorthand for `getOrElse { defaultValue }` (see [getOrElse]).\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R> Result<T>.getOrElse(defaultValue: R): R {\n if (isFailure) return defaultValue\n return value as T\n}\n`\n \* Returns the result of [onSuccess] for the encapsulated value if this instance represents [success][Result.isSuccess]\n \* or the result of [onFailure] function for the encapsulated [Throwable] exception if it is [failure][Result.isFailure].\n \* Note, that this function rethrows any [Throwable] exception thrown by [onSuccess] or by [onFailure] function.\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T> Result<T>.fold(\n onSuccess: (value: T) -> R,\n onFailure: (exception: Throwable) -> R): R {\n contract {\n callsInPlace(onSuccess, InvocationKind.AT_MOST_ONCE)\n callsInPlace(onFailure, InvocationKind.AT_MOST_ONCE)\n }\n return when (val exception = exceptionOrNull()) {\n null -> onSuccess(value as T)\n else -> onFailure(exception)\n }\n}\n`\n // transformation\n \* Returns the encapsulated result of the given [transform] function applied to the encapsulated value\n \* if this instance represents [success][Result.isSuccess] or the\n \* original encapsulated [Throwable] exception if it is [failure][Result.isFailure].\n \* Note, that this function rethrows any [Throwable] exception thrown by [transform] function.\n \* See [mapCatching] for an alternative that encapsulates exceptions.\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T> Result<T>.map(transform: (value: T) -> R): Result<R> {\n contract {\n callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n }\n return when {\n isSuccess -> Result.success(transform(value as T))\n else -> Result(value)\n }\n}\n`\n \* Returns the encapsulated result of the given [transform] function applied to the encapsulated value\n \* if this instance represents [success][Result.isSuccess] or the\n \* original encapsulated [Throwable] exception if it is [failure][Result.isFailure].\n \* This function catches any [Throwable] exception thrown by [transform] function and encapsulates it as a failure.\n \* See [map] for an alternative that rethrows exceptions from `transform` function.\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T> Result<T>.mapCatching(transform: (value: T) -> R): Result<R> {\n return when {\n isSuccess -> runCatching { transform(value as T) }\n else -> Result(value)\n }\n}\n`\n \* Returns the encapsulated result of the given [transform] function applied to the encapsulated [Throwable] exception\n \* if this instance represents [failure][Result.isFailure] or the\n \* original encapsulated value if it is [success][Result.isSuccess].\n \* Note, that this function rethrows any [Throwable] exception thrown by [transform] function.\n \* See [recoverCatching] for an alternative that encapsulates exceptions.\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R> Result<T>.recover(transform: (exception: Throwable) -> R): Result<R> {\n contract {\n callsInPlace(transform, InvocationKind.AT_MOST_ONCE)\n }\n return when (val exception = exceptionOrNull()) {\n null -> this\n else -> Result.success(transform(exception))\n }\n}\n`\n \* Returns the encapsulated result of the given [transform] function applied to the encapsulated [Throwable] exception\n \* if this instance represents [failure][Result.isFailure] or the\n \* original encapsulated value if it is [success][Result.isSuccess].\n \* This function catches any [Throwable] exception thrown by [transform] function and encapsulates it as a failure.\n \* See [recover] for an alternative that rethrows exceptions.\n \*  
`@InlineOnly\n@SinceKotlin("1.3")\npublic inline fun <R, T : R> Result<T>.recoverCatching(transform: (exception: Throwable) -> R): Result<R> {\n return when (val exception = exceptionOrNull()) {\n null -> this\n else -> runCatching { transform(exception) }\n }\n}\n`\n // "peek" onto value/exception and pipe\n \* Performs the given [action] on the encapsulated [Throwable] exception if this instance represents [failure][Result.isFailure].\n \* Returns the original `Result` unchanged.\n

```

*^@InlineOnly^@SinceKotlin("1.3")^public inline fun <T> Result<T>.onFailure(action: (exception:
Throwable) -> Unit): Result<T> {^n contract {^n callsInPlace(action, InvocationKind.AT_MOST_ONCE)^n
}^n exceptionOrNull()?.let { action(it) }^n return this^}^n/^n * Performs the given [action] on the
encapsulated value if this instance represents [success][Result.isSuccess].^n * Returns the original `Result`
unchanged.^n *^@InlineOnly^@SinceKotlin("1.3")^public inline fun <T> Result<T>.onSuccess(action: (value:
T) -> Unit): Result<T> {^n contract {^n callsInPlace(action, InvocationKind.AT_MOST_ONCE)^n }^n if
(isSuccess) action(value as T)^n return this^}^n// -----^n"/^n * Copyright 2010-2020 JetBrains
s.r.o. and Kotlin Programming Language contributors.^n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.^n/^n^package kotlin.coroutines^nimport
kotlin.contracts.^nimport kotlin.coroutines.intrinsics.^nimport kotlin.internal.InlineOnly^/^n * Interface
representing a continuation after a suspension point that returns a value of type `T`.^n
*^@SinceKotlin("1.3")^public interface Continuation<in T> {^n /*^n * The context of the coroutine that
corresponds to this continuation.^n *^n public val context: CoroutineContext^n /*^n * Resumes the
execution of the corresponding coroutine passing a successful or failed [result] as the^n * return value of the last
suspension point.^n *^n public fun resumeWith(result: Result<T>)^}^n/^n * Classes and interfaces marked
with this annotation are restricted when used as receivers for extension^n * `suspend` functions. These `suspend`
extensions can only invoke other member or extension `suspend` functions on this particular^n * receiver and are
restricted from calling arbitrary suspension functions.^n
*^@SinceKotlin("1.3")^@Target(AnnotationTarget.CLASS)^@Retention(AnnotationRetention.BINARY)^public
annotation class RestrictsSuspension^/^n * Resumes the execution of the corresponding coroutine passing
[value] as the return value of the last suspension point.^n *^@SinceKotlin("1.3")^@InlineOnly^public inline
fun <T> Continuation<T>.resume(value: T): Unit =^n resumeWith(Result.success(value))^}^n/^n * Resumes the
execution of the corresponding coroutine so that the [exception] is re-thrown right after the^n * last suspension
point.^n *^@SinceKotlin("1.3")^@InlineOnly^public inline fun <T>
Continuation<T>.resumeWithException(exception: Throwable): Unit =^n
resumeWith(Result.failure(exception))^}^n/^n * Creates a [Continuation] instance with the given [context] and
implementation of [resumeWith] method.^n *^@SinceKotlin("1.3")^@InlineOnly^public inline fun <T>
Continuation(^n context: CoroutineContext,^n crossinline resumeWith: (Result<T>) -> Unit)^n): Continuation<T>
=^n object : Continuation<T> {^n override val context: CoroutineContext^n get() = context^}^n
override fun resumeWith(result: Result<T>) =^n resumeWith(result)^}^n/^n * Creates a coroutine
without a receiver and with result type [T].^n * This function creates a new, fresh instance of suspendable
computation every time it is invoked.^n *^n * To start executing the created coroutine, invoke `resume(Unit)` on the
returned [Continuation] instance.^n * The [completion] continuation is invoked when the coroutine completes with a
result or an exception.^n * Subsequent invocation of any resume function on the resulting continuation will produce
an [IllegalStateException].^n *^@SinceKotlin("1.3")^@Suppress("UNCHECKED_CAST")^public fun <T>
(suspend () -> T).createCoroutine(^n completion: Continuation<T>)^n): Continuation<Unit> =^n
SafeContinuation(createCoroutineUnintercepted(completion).intercepted(), COROUTINE_SUSPENDED)^}^n/^n *
Creates a coroutine with receiver type [R] and result type [T].^n * This function creates a new, fresh instance of
suspendable computation every time it is invoked.^n *^n * To start executing the created coroutine, invoke
`resume(Unit)` on the returned [Continuation] instance.^n * The [completion] continuation is invoked when the
coroutine completes with a result or an exception.^n * Subsequent invocation of any resume function on the resulting
continuation will produce an [IllegalStateException].^n
*^@SinceKotlin("1.3")^@Suppress("UNCHECKED_CAST")^public fun <R, T> (suspend R.() ->
T).createCoroutine(^n receiver: R,^n completion: Continuation<T>)^n): Continuation<Unit> =^n
SafeContinuation(createCoroutineUnintercepted(receiver, completion).intercepted(),
COROUTINE_SUSPENDED)^}^n/^n * Starts a coroutine without a receiver and with result type [T].^n * This
function creates and starts a new, fresh instance of suspendable computation every time it is invoked.^n * The
[completion] continuation is invoked when the coroutine completes with a result or an exception.^n

```

```

*\n@SinceKotlin("1.3")\n@Suppress("UNCHECKED_CAST")\npublic fun <T> (suspend () ->
T).startCoroutine(\n completion: Continuation<T>)\n) {\n
createCoroutineUnintercepted(completion).intercepted().resume(Unit)\n}\n\n/**\n * Starts a coroutine with receiver
type [R] and result type [T].\n * This function creates and starts a new, fresh instance of suspendable computation
every time it is invoked.\n * The [completion] continuation is invoked when the coroutine completes with a result or
an exception.\n */\n*\n@SinceKotlin("1.3")\n@Suppress("UNCHECKED_CAST")\npublic fun <R, T> (suspend
R.() -> T).startCoroutine(\n receiver: R,\n completion: Continuation<T>)\n) {\n
createCoroutineUnintercepted(receiver, completion).intercepted().resume(Unit)\n}\n\n/**\n * Obtains the current
continuation instance inside suspend functions and suspends\n * the currently running coroutine.\n */\n * In this
function both [Continuation.resume] and [Continuation.resumeWithException] can be used either synchronously
in\n * the same stack-frame where the suspension function is run or asynchronously later in the same thread or\n *
from a different thread of execution. Subsequent invocation of any resume function will produce an
[IllegalStateException].\n */\n*\n@SinceKotlin("1.3")\n@InlineOnly\npublic suspend inline fun <T>
suspendCoroutine(crossinline block: (Continuation<T>) -> Unit): T {\n contract { callsInPlace(block,
InvocationKind.EXACTLY_ONCE) }\n return suspendCoroutineUninterceptedOrReturn { c: Continuation<T> -
>\n val safe = SafeContinuation(c.intercepted())\n block(safe)\n safe.getOrThrow()\n }\n}\n\n/**\n *
Returns the context of the current coroutine.\n */\n*\n@SinceKotlin("1.3")\n@Suppress("WRONG_MODIFIER_TARGET")\n@InlineOnly\npublic suspend inline
val coroutineContext: CoroutineContext\n get() {\n throw NotImplementedError("Implemented as
intrinsic")\n }\n"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n*\n@npackage kotlin.coroutines.intrinsics\n\nimport kotlin.coroutines.*\nimport kotlin.internal.InlineOnly\n\n/**\n *
Starts an unintercepted coroutine without a receiver and with result type [T] and executes it until its first
suspension.\n * Returns the result of the coroutine or throws its exception if it does not suspend or
[COROUTINE_SUSPENDED] if it suspends.\n * In the latter case, the [completion] continuation is invoked when
the coroutine completes with a result or an exception.\n */\n * The coroutine is started directly in the invoker's thread
without going through the [ContinuationInterceptor] that might\n * be present in the completion's
[CoroutineContext]. It is the invoker's responsibility to ensure that a proper invocation\n * context is established.\n
*\n * This function is designed to be used from inside of [suspendCoroutineUninterceptedOrReturn] to resume the
execution of the suspended\n * coroutine using a reference to the suspending function.\n */\n*\n@SinceKotlin("1.3")\n@InlineOnly\npublic actual inline fun <T> (suspend () ->
T).startCoroutineUninterceptedOrReturn(\n completion: Continuation<T>)\n): Any? =
this.asDynamic()(completion, false)\n\n/**\n * Starts an unintercepted coroutine with receiver type [R] and result
type [T] and executes it until its first suspension.\n * Returns the result of the coroutine or throws its exception if
it does not suspend or [COROUTINE_SUSPENDED] if it suspends.\n * In the latter case, the [completion]
continuation is invoked when the coroutine completes with a result or an exception.\n */\n * The coroutine is started
directly in the invoker's thread without going through the [ContinuationInterceptor] that might\n * be present in the
completion's [CoroutineContext]. It is the invoker's responsibility to ensure that a proper invocation\n * context is
established.\n */\n * This function is designed to be used from inside of [suspendCoroutineUninterceptedOrReturn]
to resume the execution of the suspended\n * coroutine using a reference to the suspending function.\n */\n*\n@SinceKotlin("1.3")\n@InlineOnly\npublic actual inline fun <R, T> (suspend R.() ->
T).startCoroutineUninterceptedOrReturn(\n receiver: R,\n completion: Continuation<T>)\n): Any? =
this.asDynamic()(receiver, completion, false)\n\n@InlineOnly\ninternal actual inline fun <R, P, T> (suspend R.(P) -
> T).startCoroutineUninterceptedOrReturn(\n receiver: R,\n param: P,\n completion: Continuation<T>)\n):
Any? = this.asDynamic()(receiver, param, completion, false)\n\n/**\n * Creates unintercepted coroutine without
receiver and with result type [T].\n * This function creates a new, fresh instance of suspendable computation every
time it is invoked.\n */\n * To start executing the created coroutine, invoke `resume(Unit)` on the returned
[Continuation] instance.\n * The [completion] continuation is invoked when coroutine completes with result or

```

exception.

\* This function returns unintercepted continuation.

\* Invocation of `resume(Unit)` starts coroutine immediately in the invoker's call stack without going through the `[ContinuationInterceptor]` that might be present in the completion's `[CoroutineContext]`.

\* It is the invoker's responsibility to ensure that a proper invocation context is established.

\* Note that `[completion]` of this function may get invoked in an arbitrary context.

\* `[Continuation.intercepted]` can be used to acquire the intercepted continuation.

\* Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of both the coroutine and `[completion]` happens in the invocation context established by `[ContinuationInterceptor]`.

\* Repeated invocation of any resume function on the resulting continuation corrupts the state machine of the coroutine and may result in arbitrary behaviour or exception.

```

@SinceKotlin("1.3")
public actual fun <T> (suspend () -> T).createCoroutineUnintercepted(
    completion: Continuation<T>): Continuation<Unit> =
    // Kotlin/JS suspend lambdas have an extra parameter
    `suspended`
    if (this.asDynamic().length == 2) {
        // When `suspended` is true the continuation is created,
        but not executed
        this.asDynamic()(completion, true)
    } else {
        createCoroutineFromSuspendFunction(completion) {
            this.asDynamic()(completion)
        }
    }

```

\* Creates unintercepted coroutine with receiver type `[R]` and result type `[T]`.

\* This function creates a new, fresh instance of suspendable computation every time it is invoked.

\* To start executing the created coroutine, invoke `resume(Unit)` on the returned `[Continuation]` instance.

\* The `[completion]` continuation is invoked when coroutine completes with result or exception.

\* This function returns unintercepted continuation.

\* Invocation of `resume(Unit)` starts coroutine immediately in the invoker's call stack without going through the `[ContinuationInterceptor]` that might be present in the completion's `[CoroutineContext]`.

\* It is the invoker's responsibility to ensure that a proper invocation context is established.

\* Note that `[completion]` of this function may get invoked in an arbitrary context.

\* `[Continuation.intercepted]` can be used to acquire the intercepted continuation.

\* Invocation of `resume(Unit)` on intercepted continuation guarantees that execution of both the coroutine and `[completion]` happens in the invocation context established by `[ContinuationInterceptor]`.

\* Repeated invocation of any resume function on the resulting continuation corrupts the state machine of the coroutine and may result in arbitrary behaviour or exception.

```

@SinceKotlin("1.3")
public actual fun <R, T> (suspend R.() -> T).createCoroutineUnintercepted(
    receiver: R, completion: Continuation<T>):
    Continuation<Unit> =
    // Kotlin/JS suspend lambdas have an extra parameter `suspended`
    if (this.asDynamic().length == 3) {
        // When `suspended` is true the continuation is created, but not executed
        this.asDynamic()(receiver, completion, true)
    } else {
        createCoroutineFromSuspendFunction(completion) {
            this.asDynamic()(receiver, completion)
        }
    }

```

\* Intercepts this continuation with `[ContinuationInterceptor]`.

\* This function shall be used on the immediate result of `[createCoroutineUnintercepted]` or `[suspendCoroutineUninterceptedOrReturn]`, in which case it checks for `[ContinuationInterceptor]` in the continuation's `[context][Continuation.context]`, invokes `[ContinuationInterceptor.interceptContinuation]`, caches and returns the result.

\* If this function is invoked on other `[Continuation]` instances it returns `this` continuation unchanged.

```

@SinceKotlin("1.3")
public actual fun <T> Continuation<T>.intercepted(): Continuation<T> =
    (this as? CoroutineImpl)?.intercepted() ?:
    this
private inline fun <T> createCoroutineFromSuspendFunction(
    completion: Continuation<T>,
    crossinline block: () -> Any?): Continuation<Unit> {
    @Suppress("UNCHECKED_CAST")
    return object : CoroutineImpl(completion as Continuation<Any?>) {
        override fun doResume(): Any? {
            exception?.let { throw it }
            return block()
        }
    }
}

```

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\* `package kotlin.js`

\* Mirrors signature from JS IR

BE

Used for

```

js.translator/testData/box/number/mulInt32.kt
@library
@JsName("imulEmulated")
@Suppress("UNUSED_PARAMETER")
internal fun imul(x: Int, y: Int): Int =
    definedExternally
@Suppress("NOTHING_TO_INLINE")
internal inline fun isArrayish(o: dynamic) =
    js("Kotlin").isArrayish(o)

```

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```

license/LICENSE.txt file.\n *\/\npackage kotlin\n\n// NOTE: Do not author your exceptions as they are written in
this file, instead use this template:\n/*\npublic open class MyException : Exception {\n    constructor() : super()\n    constructor(message: String?) : super(message)\n    constructor(message: String?, cause: Throwable?) :
super(message, cause)\n    constructor(cause: Throwable?) : super(cause)\n}\n*/\n\n// TODO: remove primary
constructors, make all secondary KT-22055\n\n@Suppress(\\"USELESS_ELVIS_RIGHT_IS_NULL\\")\npublic
actual open class Error actual constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null)
{\n    actual constructor() : this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual
constructor(cause: Throwable?) : this(undefin
cause)\n}\n\n@Suppress(\\"USELESS_ELVIS_RIGHT_IS_NULL\\")\npublic actual open class Exception actual
constructor(message: String?, cause: Throwable?) : Throwable(message, cause ?: null) {\n    actual constructor() :
this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual constructor(cause:
Throwable?) : this(undefin
cause)\n}\n\npublic actual open class RuntimeException actual constructor(message:
String?, cause: Throwable?) : Exception(message, cause) {\n    actual constructor() : this(null, null)\n    actual
constructor(message: String?) : this(message, null)\n    actual constructor(cause: Throwable?) : this(undefin
cause)\n}\n\npublic actual open class IllegalArgumentException actual constructor(message: String?, cause:
Throwable?) : RuntimeException(message, cause) {\n    actual constructor() : this(null, null)\n    actual
constructor(message: String?) : this(message, null)\n    actual constructor(cause: Throwable?) : this(undefin
cause)\n}\n\npublic actual open class IllegalStateException actual constructor(message: String?, cause: Throwable?) :
RuntimeException(message, cause) {\n    actual constructor() : this(null, null)\n    actual constructor(message:
String?) : this(message, null)\n    actual constructor(cause: Throwable?) : this(undefin
cause)\n}\n\npublic actual open class IndexOutOfBoundsException actual constructor(message: String?) : RuntimeException(message) {\n
actual constructor() : this(null)\n}\n\npublic actual open class ConcurrentModificationException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n    actual constructor() :
this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual constructor(cause:
Throwable?) : this(undefin
cause)\n}\n\npublic actual open class UnsupportedOperationException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n    actual constructor() :
this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual constructor(cause:
Throwable?) : this(undefin
cause)\n}\n\npublic actual open class NumberFormatException actual
constructor(message: String?) : IllegalArgumentException(message) {\n    actual constructor() :
this(null)\n}\n\npublic actual open class NullPointerException actual constructor(message: String?) :
RuntimeException(message) {\n    actual constructor() : this(null)\n}\n\npublic actual open class
ClassCastException actual constructor(message: String?) : RuntimeException(message) {\n    actual constructor() :
this(null)\n}\n\npublic actual open class AssertionError\n\n@SinceKotlin(\\"1.4\\")\nconstructor(message: String?,
cause: Throwable?) : Error(message, cause) {\n    actual constructor() : this(null)\n    constructor(message: String?) :
this(message, null)\n    actual constructor(message: Any?) : this(message.toString(), message as
Throwable)\n}\n\npublic actual open class NoSuchElementException actual constructor(message: String?) :
RuntimeException(message) {\n    actual constructor() : this(null)\n}\n\n@SinceKotlin(\\"1.3\\")\npublic actual open
class ArithmeticException actual constructor(message: String?) : RuntimeException(message) {\n    actual
constructor() : this(null)\n}\n\npublic actual open class NoWhenBranchMatchedException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n    actual constructor() :
this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual constructor(cause:
Throwable?) : this(undefin
cause)\n}\n\npublic actual open class UninitializedPropertyAccessException actual
constructor(message: String?, cause: Throwable?) : RuntimeException(message, cause) {\n    actual constructor() :
this(null, null)\n    actual constructor(message: String?) : this(message, null)\n    actual constructor(cause:
Throwable?) : this(undefin
cause)\n}\n\n"/*\n * Copyright 2010-2019 JetBrains s.r.o. Use of this source code is
governed by the Apache 2.0 license\n * that can be found in the license/LICENSE.txt file.\n
*/\n\n\n@file:Suppress(\\"UNUSED_PARAMETER\\")\n\npackage kotlin.js\n\n@kotlin.internal.InlineOnly\ninternal
inline fun jsDeleteProperty(obj: Any, property: Any) {\n    js(\\"delete

```

```

obj[property]\")\n)\n\n@kotlin.internal.InlineOnly\ninternal inline fun jsBitwiseOr(lhs: Any?, rhs: Any?): Int =\njs(\"lhs | rhs\").unsafeCast<Int>()\",\"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language\n contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n license/LICENSE.txt file.\n */\npackage kotlin.math\n\n/**\n * Returns this value with the sign bit same as of the\n [sign] value.\n */\n * If [sign] is `NaN` the sign of the result is undefined.\n */\n@SinceKotlin(\"1.2\")\npublic actual\nfun Double.withSign(sign: Double): Double {\n    val thisSignBit =\njs(\"Kotlin\").doubleSignBit(this).unsafeCast<Int>()\n    val newSignBit =\njs(\"Kotlin\").doubleSignBit(sign).unsafeCast<Int>()\n    return if (thisSignBit == newSignBit) this else -\nthis}\",\"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of\n this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n */\npackage kotlin\n\n/**\n * Returns a bit representation of the specified floating-point value as [Long]\n * according to the IEEE 754 floating-point \"double format\" bit layout.\n */\n@SinceKotlin(\"1.2\")\n@library(\"doubleToBits\")\npublic actual fun Double.toBits(): Long =\ndefinedExternally\n\n/**\n * Returns a bit representation of the specified floating-point value as [Long]\n * according to the IEEE 754 floating-point \"double format\" bit layout,\n * preserving `NaN` values exact layout.\n */\n@SinceKotlin(\"1.2\")\n@library(\"doubleToRawBits\")\npublic actual fun Double.toRawBits(): Long =\ndefinedExternally\n\n/**\n * Returns the [Double] value corresponding to a given bit representation.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Double.Companion.fromBits(bits:\nLong): Double = js(\"Kotlin\").doubleFromBits(bits).unsafeCast<Double>()\n\n/**\n * Returns a bit representation\n of the specified floating-point value as [Int]\n * according to the IEEE 754 floating-point \"single format\" bit\n layout.\n */\n * Note that in Kotlin/JS [Float] range is wider than \"single format\" bit layout can represent,\n * so\n some [Float] values may overflow, underflow or loose their accuracy after conversion to bits and back.\n */\n@SinceKotlin(\"1.2\")\n@library(\"floatToBits\")\npublic actual fun Float.toBits(): Int =\ndefinedExternally\n\n/**\n * Returns a bit representation of the specified floating-point value as [Int]\n * according\n to the IEEE 754 floating-point \"single format\" bit layout,\n * preserving `NaN` values exact layout.\n */\n * Note\n that in Kotlin/JS [Float] range is wider than \"single format\" bit layout can represent,\n * so\n some [Float] values\n may overflow, underflow or loose their accuracy after conversion to bits and back.\n */\n@SinceKotlin(\"1.2\")\n@library(\"floatToRawBits\")\npublic actual fun Float.toRawBits(): Int =\ndefinedExternally\n\n/**\n * Returns the [Float] value corresponding to a given bit representation.\n */\n@SinceKotlin(\"1.2\")\n@kotlin.internal.InlineOnly\npublic actual inline fun Float.Companion.fromBits(bits:\nInt): Float =\njs(\"Kotlin\").floatFromBits(bits).unsafeCast<Float>()\n\n@Suppress(\"NOTHING_TO_INLINE\")\ninternal\ninline fun Long(low: Int, high: Int) = js(\"Kotlin\").Long.fromBits(low, high).unsafeCast<Long>()\ninternal inline\nval Long.low: Int get() = this.asDynamic().getLowBits().unsafeCast<Int>()\ninternal inline val Long.high: Int get()\n= this.asDynamic().getHighBits().unsafeCast<Int>()\",\"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin\n Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be\n found in the license/LICENSE.txt file.\n */\n */\nimport kotlin.reflect.KClass\n\n@PublishedApi\ninternal fun <T :\nAnnotation> KClass<*>.findAssociatedObject(@Suppress(\"UNUSED_PARAMETER\") annotationClass:\nKClass<T>): Any? {\n    // This API is not supported in js-v1. Return `null` to be source-compatible with js-ir.\n    return null\n}\",\"/*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of\n this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n */\npackage kotlin.text\n\n/**\n * Returns a string representation of this [Long] value in the specified [radix].\n */\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n@SinceKotlin(\"1.2\")\npublic actual fun Long.toString(radix: Int): String =\nasDynamic().toString(checkRadix(radix))\",\"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming\n Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n license/LICENSE.txt file.\n */\n */\npackage kotlin.text\n\n// NOTE: THIS FILE IS AUTO-GENERATED by the\nGenerateUnicodeData.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n// 1343 ranges

```

```
totally\nprivate object Category {\n    val decodedRangeStart: IntArray\n    val decodedRangeCategory: IntArray\n\n    init {\n        val toBase64 =  
        \"\"ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/\n        val fromBase64 =  
        IntArray(128)\n        for (i in toBase64.indices) {\n            fromBase64[toBase64[i].code] = i\n        }\n        \n        //  
        rangeStartDiff.length = 1482\n        val rangeStartDiff =  
        \"gBCFEDCKCDCaDDaDBhBCEEDDDDDDEDXBHYBH5BRwBGDCHDCIDFHDCHFDCDEIRTEE7BGHDDJI  
        CBbSEMOFGERwDEDDDDDECEFCRBJhBFDCYFFCCzBvBjBBFC3BohDbmBDGpBDDCtBBJbEECLGDFC  
        LDCgBBKVKEDiDDHCFECECKCEODBebC5CLBOKhBJDDDDWEBHFCFCPBZDEL1BVBSLPBgBB2BDB  
        DICFBHKCKCPDBHEDWBHEDDDDEDEDIBDGDCCKCGDDDCGECCWBFMDDCDEDDCHDDHKDDDBK  
        DBHFCWBFGFDBDDFEDBPDDKCHBGDCHEDWBFGFDCEDEDBHDDGDCKCGJEGDBFDDFDDDDDME  
        FDBFDCGBOKDFDFDCGFCXBQDDDDDBEGEDFDDKHBHDDGFCXBKBFCEFCFCHCHECKDNCCFC  
        oBEDECFFDDDDHDCKJBGDCSDYBJEHBFDDEBIGKDCMuBFHEBGBIBKCKbFBFBXEIFJDFDGCKCEgB  
        BDPEDGKKGECIBkBEOBDFFLBkBBIBEFECIBrBCEBEGDBKGGDDDDDDCHDENDCFEKDDIBDDFrBCD  
        pKBECGEECPBBEChBBECGEECPB5BBECjCCDJUDQKG2CCGDsTCRbaCDrCDDIHNBEDLSDCJSCMLFC  
        CM0BDHGFLLBFDDKKGGEFDDDBKgjBB1BHfChBDFmCKfDDDDDDCGDCFDKcCFLsBEaGKBDiBXDDD1  
        BDGDEIGJEKGGHGBGCMF/BEBvCEEDDFHEKHKJDDDeDDGDkSBFEDCIEkBIICCFDKDDKeGCJHrBCDI  
        IDBNBHEBEFDBFsB/BNBiBIB6BBF1EiIdJGCGCIIIGCGCIIIOCIIIIDFEDDBFEDDDDEBDIFDDFEDBLF  
        GCEECFBJCDEDCLDKBFBKCCGDDKDDNDgBQNEBDMPPFDEDEBFFHECEBEEDFBEDDQjBCEDEFFC  
        CJHBeEEfsIIEUCHCxCBeZoBGICZLV8BuCW3FBjB2BivDB4HOesBFCfKQgJEW/BEgBCiIwBVCGnBCgBBp  
        DvBBuBEDBHEFGCCjDCGEDCFCFIBDDF4BHCObXJHBHBHBHBHBHBHBgBCECGHGEDIKFCEDM  
        EtBaB5CM2GaMEDDCKCGFCJEDFDDDC2CDDDB6CDCFrBB+CDEKgbkBMQfBKeIBPgBKnBPgKguGgC9  
        vUDVB3jBD3BjOBGCSIBDQKCUuBDDKCCcCMCKCGIXJcNC/BBHGKDECEVFBEEMCEEbqBDDGDFDXD  
        CEBDGEG0BEICyBQCICKGSGDEBKcICXLCLBdDDBvBDECCDNCKECFCJKFBpBFEDCJDBICCKCEQBG  
        DDBYBEDCEFBYDCELEDDCKGCGGJHBHBrBBEJDEwCjBIDCKGk9KMxExBEggCgoGuLcQDmBHMFFC  
        KBNBFBIsDQRrLCQgCC2BoBMCCQGEQDCQDDDDFDGDECEEFBnEEBFEDCKCDCaDDaDBFCKBtBCf  
        DGCGCFEDDDDDCECKDC\"\n        val diff = decodeVarLenBase64(rangeStartDiff, fromBase64, 1342)\n        val  
        start = IntArray(diff.size + 1)\n        for (i in diff.indices) {\n            start[i + 1] = start[i] + diff[i]\n        }\n        decodedRangeStart = start\n        \n        // rangeCategory.length = 2033\n        val rangeCategory =  
        \"PsY44a41W54UYJZYB14W7XC15WZPsYa84b19Zw8b85Lr7C44brlerrYBZBCZCiBiBhCiiBhChiBhiCBhh  
        ChiCihBhChCChiBhChiCIBCFhjCiBiBihDhiBhCCihBiBhCCFCEbEbEb7EbGhCk7BixRkiCi4BRbh4BhRhCBR  
        BCiiBBCiBChiZBCBCiBcGHhChCiBRBxxEYC40Rx8c6RGUm4GRFRFYRQZ44acG4wRYFEFGJYIIIGFIYGwc  
        GmkEmcGFJfI8cYxwFGFRGFRGFRJFGkkcYkxRm6aFGEgmmEmEGRYRFGxxYFRFRFRGQGIFmIFIGIooGF  
        GFGYJ4EFmoIRFlxRlxRFRFxlRxlFlIRxmFIGxxIoxRomFRIRxIFlmGRJfAL86F4mRxmGoRFRFRFRFlIRxGIGR  
        xmGxmGmxRxGRFIRRjmmFllGYRmmIRFlIRIRFRFlIRFxxGFIGmmRoxImxRFRllGmxRJ4aRFgxmIoRFlxRlxR  
        FRFlIRFxxGllmoGmmRxoIxoIGRmmIRxIFlmGRJ8FLRxmFFRFlIRlIRxxFIRlxRxlFRFRFRooGRlOOomRxFRIR  
        JLc8aRmoIoGFllRIRFRFRlmgmoIooRGRGRxmGFRllGmxRJRYL8lGooYFlIRIRFRFRFRmlIIXGooRGRIRlxFG  
        RJxlFRGIFlIRFlmGIGxIooRomF8xRxxFlIILFGRJLcFxmIoRFRFRFxIRFRxxGxxIooGmmRRIRJxxIoYRFlIG  
        RaFEGYJYRxlFRFRFIRFlIGlXRFxEGRJFRFfcY84c8mGcJL8G1WIFRFRGIGmmYFGRGRcGc88RYcYRFIGI  
        GmmIomGFJYFooGmlFlIGmmFIFIFGFmoIGIomFJIm8cBhRRxxBC4ECFRFRFIRFRFRFRFRFRFRFRFRFRFRFR  
        FRGYLRFcRBRCxxUF8YFMF1WRFYKFRFRFRGFRGFRGFRFlIRGRFmmIGIooGGY44E46FmxRJRLRY44  
        U44GmmQRJRFEFrFGfIGRFRFxmgmoIooGmoIoxRxxIoGIGRxxcx4YJFRFRFRFRJLRcFmmIomRx4YFoGG  
        mRomIGIGmxRJRJRyEYRGmmHRGIFmIGmIooGFRJYcGcRmmIFomGmmIomGmlFJfmoGooGGIRYFIFIG  
        RYJRfJEYCRBRBYRGYGIGFGFlIGomGFRCECECEGRGHcCiBCBCRBRCBCBCBRBCxBCBCRCDCDCD  
        CiiRBj7CbCiiRBj7b7iCiiRxiCBRbCBbxxCiiRBj7bRMQUY9+V9+VYtOQMY9eY43X44Z1WY54XYMQRQrER  
        LZ12ELZ12RERaRGHGHGR88B88BihBhiChhC8hcZBc8BB8CBCFi8cihBZBC8Z8CLKhCKr8cRZcZc88ZcZc85  
        Z8ZcZc1WcZc1WcZcZcZcRcRLcLcZcZcZcZc1WLcZ1WZ1WZcZ1WZ1WZ1WZcZcZcRcRcBRcixBBCiBBihC  
        CEbhCCchCGhCRY44LCiRRxxCFRkYRGFR  
        48cRcRcRcRcRs4Y48EIK1Wc1W12U2cKGooUE88KqqEl4c8RFxxGm7bkkFUF4kekFRFRFRx8cLcFcRfRcLcLc
```



```

\"ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/\n    val fromBase64 =
IntArray(128)\n    for (i in toBase64.indices) {\n        fromBase64[toBase64[i].code] = i\n    }\n    \n    //
rangeStartDiff.length = 356\n    val rangeStartDiff =
\"hCgBpCQGYHZH5BRpBPPPPPRMP5BPPICPP6BkEPPPPcXPzBvBrB3BOiDoBHwD+E3DauCnFmBmB2D
6E1BIBTiBmBIBP5BhBiBrBvBjBqBnBPRtBiCmCtBIB0BmB5BiB7BmBgEmChBZgCoEoGVpBsfRhBPqKQ2B
wBYoFgB4CJuTiEvBuCuDrF5DgEgFIJ1DgFmBQtBsBRGsB+BPiBID1EIjDPRPPPPPPPPGQSQS/DxENVNU+
B9zCwBwBPPCkDPNnBPqDYY1R8B7FkFgTgwGgwUwmBgKwBuBScmEP/BPPPPPrBP8B7F1B/ErBqC6B7B
iBmBfQsBUwCw/KwqIwLwETPcPjQgJxFgBIBsD\"\n    val diff = decodeVarLenBase64(rangeStartDiff,
fromBase64, 222)\n    val start = IntArray(diff.size)\n    for (i in diff.indices) {\n        if (i == 0) start[i] =
diff[i]\n        else start[i] = start[i - 1] + diff[i]\n    }\n    decodedRangeStart = start\n    \n    //
rangeLength.length = 328\n    val rangeLength =
\"aaMBXHYH5BRpBPPPPPRMP5BPPICPPzBDOOPPcXPzBvBjB3BOhDmBBpB7DoDYxB+EiBP1DoExBkB
QhBekBPmBgBhBctBiBMWOOXhCsBpBkBUV3Ba4BkB0DiCgBXgBtD4FSdBfPhBPpKP0BvBXjEQ2CGsT8Dh
BtCqDpFvD1D3E0lrD2EkBjRBDObSb+BPiBIB1EIjDPPPPPPPPPPGPPMNLsBNPNPKCvBvBPPCkDPBmBPh
DXXgD4B6FzEgDguG9vUtkB9JcuBSckEP/BPPPPPPBPf4FrBjEhBpC3B5BKaWPrBOWck/KsCuLqDHPbPxPsFt
EaaqDL\"\n    decodedRangeLength = decodeVarLenBase64(rangeLength, fromBase64, 222)\n    \n    //
rangeCategory.length = 959\n    val rangeCategory =
\"GFjgggUHGFFZZZmzpz5qB6s6020B60ptltB6smt2sB60mz22B1+vv+8BZZ5s2850BW5q1ymtB506smzBF3q1
q1qB1q1q1+Bgii4wDTm74g3KigggxqM60q1q1Bq1o1q1BF1qlqrBZ2q5wprBGFZWWZGHFsjiioLowgmOowjkw
CkgoiIk7ligGogiioBkwkiYkzj2oNoi+sbkwj04DghhkQ8wgiYkgoioDsgnkwC4gikQ//v+85BkwvoIsgoyI4ygu0whiw
Eowri4CoghsJowgqYowgm4DkwgsY/nwnzPowhmYkg6wI8yggZswikwHgXgmIoxgqYkwwgk4DkxgmIkgoioBsgsso
BgzyI8g9gL8g9kI0wgwJoxgkoC0wgioFkw/wI0w53iF4gioYowjmgBHGq1qkgwBF1q1q8qBHwghuIwghyKk0go
QkwgoQk3goQHGFHkyg0pBgxj6IoinkxDswno7Ikwhz9Bo0gioB8z48Rwli0xN0mpjoX8w78pDwltoqKHFGGwwg
sIHFH3q1q16BFHWFZ1q10q1B2qlwq1B1q10q1B2q1yq1B6q1gq1Biq1qhxBir1qp1Bqt1q1qB1g1q1+B//3q16B//q
1qBH/qlq9Bholqq9B1i00a1q10qD1op1HkwmigEigy6Cptogq1Bixo1kDq7/j00B2qgoBWGFm1lz50B6s5q1+BG
WhggzhwBFFhgk4//Bo2jigE8wgul8wgul8wgugUog1qoB4qjmIwwi2KkgYHHH4lBgiFWkgIWOghssMmz5smrBZ
3q1y50B5sm7gzBtz1smzB5smz50BqzqtzB5sgzqzBF2/9//5BowgoIwmnzkPkwgk4C8ys65BkgoqI0wgy6FghquZ0
2giY0ghiIsgH24B4ghsQ8QF/v1q1OFs008iCHHF1qggz/B8wg6Iznv+//B08QgohsjK0QGfK7hsQ4gB\"\n
decodedRangeCategory = decodeVarLenBase64(rangeCategory, fromBase64, 222)\n    }\n}\n\n/**\n * Returns
`true` if this character is a letter.\n */\ninternal fun Char.isLetterImpl(): Boolean {\n    return getLetterType() !=
0\n}\n\n/**\n * Returns `true` if this character is a lower case letter, or it has contributory property
Other_Lowercase.\n */\ninternal fun Char.isLowerCaseImpl(): Boolean {\n    return getLetterType() == 1 ||
code.isOtherLowercase()\n}\n\n/**\n * Returns `true` if this character is an upper case letter, or it has contributory
property Other_Uppercase.\n */\ninternal fun Char.isUpperCaseImpl(): Boolean {\n    return getLetterType() == 2 ||
code.isOtherUppercase()\n}\n\n/**\n * Returns\n * - `1` if the character is a lower case letter,\n * - `2` if the
character is an upper case letter,\n * - `3` if the character is a letter but not a lower or upper case letter,\n * - `0`
otherwise.\n */\nprivate fun Char.getLetterType(): Int {\n    val ch = this.code\n    val index =
binarySearchRange(Letter.decodedRangeStart, ch)\n    val rangeStart = Letter.decodedRangeStart[index]\n    val
rangeEnd = rangeStart + Letter.decodedRangeLength[index] - 1\n    val code =
Letter.decodedRangeCategory[index]\n    if (ch > rangeEnd) {\n        return 0\n    }\n    val lastTwoBits = code
and 0x3\n    if (lastTwoBits == 0) { // gap pattern\n        var shift = 2\n        var threshold = rangeStart\n        for (i
in 0..1) {\n            threshold += (code shr shift) and 0x7f\n            if (threshold > ch) {\n                return 3\n
            }\n            shift += 7\n            threshold += (code shr shift) and 0x7f\n            if (threshold > ch) {\n
                return 0\n            }\n            shift += 7\n        }\n        return 3\n    }\n    if (code <= 0x7) {\n
        return lastTwoBits\n    }\n    val distance = (ch - rangeStart)\n    val shift = if (code <= 0x1F) distance % 2 else distance\n    return (code
shr (2 * shift)) and 0x3\n}\n\n\","/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/\n// NOTE: THIS FILE IS AUTO-GENERATED by the

```

```

GenerateUnicodeData.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\nprivate object
OtherLowercase {\n    internal val otherLowerStart = intArrayOf(\n        0x00aa, 0x00ba, 0x02b0, 0x02c0, 0x02e0,
0x0345, 0x037a, 0x1d2c, 0x1d78, 0x1d9b, 0x2071, 0x207f, 0x2090, 0x2170, 0x24d0, 0x2c7c, 0xa69c, 0xa770,
0xa7f8, 0xab5c, \n    )\n    internal val otherLowerLength = intArrayOf(\n        1, 1, 9, 2, 5, 1, 1, 63, 1, 37, 1, 1, 13,
16, 26, 2, 2, 1, 2, 4, \n    )\n}\n\ninternal fun Int.isOtherLowercase(): Boolean {\n    val index =
binarySearchRange(OtherLowercase.otherLowerStart, this)\n    return index >= 0 && this <
OtherLowercase.otherLowerStart[index] + OtherLowercase.otherLowerLength[index]\n}\n\n"/*\n * Copyright
2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/\n\nNOTE: THIS FILE IS AUTO-GENERATED by the GenerateUnicodeData.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\ninternal fun Int.isOtherUppercase(): Boolean
{\n    return this in 0x2160..0x216f\n        || this in 0x24b6..0x24cf\n}\n\n"/*\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/\n\nNOTE: THIS FILE IS
AUTO-GENERATED by the GenerateStandardLib.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\nimport kotlin.js.*\n\n/**\n * Returns a
character at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this char
sequence.\n */\n * @sample samples.collections.Collections.Elements.elementAt\n */\n\npublic actual fun
CharSequence.elementAt(index: Int): Char {\n    return elementAtOrElse(index) { throw
IndexOutOfBoundsException("index: $index, length: $length") }\n}\n\n"/*\n * Copyright 2010-2021 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/\n\nNOTE: THIS FILE IS
AUTO-GENERATED by the GenerateUnicodeData.kt\n// See:
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\n// 4 ranges totally\n\ninternal fun
Char.titlecaseCharImpl(): Char {\n    val code = this.code\n    // Letters repeating <Lu, Lt, Ll> sequence and code of
the Lt is a multiple of 3, e.g. <\u01c4, \u01c5, \u01c6>\n    if (code in 0x01c4..0x01cc || code in 0x01f1..0x01f3) {\n
        return (3 * ((code + 1) / 3)).toChar()\n    }\n    // Lower case letters whose title case mapping equivalent is equal
to the original letter\n    if (code in 0x10d0..0x10fa || code in 0x10fd..0x10ff) {\n        return this\n    }\n    return
uppercaseChar()\n}\n\n"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\n/\n\nNOTE: THIS FILE IS AUTO-GENERATED
by the GenerateStandardLib.kt\n// See: https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n/\n\nimport
kotlin.js.*\nimport kotlin.ranges.contains\nimport kotlin.ranges.reversed\n\n/**\n * Returns an element at the given
[index] or throws an [IndexOutOfBoundsException] if the [index] is out of bounds of this array.\n */\n */\n * @sample
samples.collections.Collections.Elements.elementAt\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.elementAt(index: Int):
UInt {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n}\n\n"/*\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n */\n */\n * @sample samples.collections.Collections.Elements.elementAt\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.elementAt(index: Int):
ULong {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n}\n\n"/*\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n */\n */\n * @sample samples.collections.Collections.Elements.elementAt\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UByteArray.elementAt(index: Int):
UByte {\n    return elementAtOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size") }\n}\n\n"/*\n * Returns an element at the given [index] or throws an [IndexOutOfBoundsException] if the [index] is
out of bounds of this array.\n */\n */\n * @sample samples.collections.Collections.Elements.elementAt\n */\n\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UShortArray.elementAt(index: Int):

```

```

UShort {\n    return elementOrElse(index) { throw IndexOutOfBoundsException("index: $index, size: $size")\n
}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UIntArray.asList(): List<UInt> {\n
return object : AbstractList<UInt>(), RandomAccess {\n    override val size: Int get() = this@asList.size\n
override fun isEmpty(): Boolean = this@asList.isEmpty()\n    override fun contains(element: UInt): Boolean =\n
this@asList.contains(element)\n    override fun get(index: Int): UInt {\n
AbstractList.checkElementIndex(index, size)\n        return this@asList[index]\n    }\n    override fun\n
indexOf(element: UInt): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UInt)\n
return -1\n        return this@asList.indexOf(element)\n    }\n    override fun lastIndexOf(element: UInt): Int\n
{\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UInt) return -1\n        return\n
this@asList.lastIndexOf(element)\n    }\n}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun ULongArray.asList(): List<ULong>\n
{\n    return object : AbstractList<ULong>(), RandomAccess {\n    override val size: Int get() = this@asList.size\n
override fun isEmpty(): Boolean = this@asList.isEmpty()\n    override fun contains(element: ULong):\n
Boolean = this@asList.contains(element)\n    override fun get(index: Int): ULong {\n
AbstractList.checkElementIndex(index, size)\n        return this@asList[index]\n    }\n    override fun\n
indexOf(element: ULong): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is\n
ULong) return -1\n        return this@asList.indexOf(element)\n    }\n    override fun lastIndexOf(element:\n
ULong): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is ULong) return -1\n
return this@asList.lastIndexOf(element)\n    }\n}\n}\n\n/**\n * Returns a [List] that wraps the original\n
array.\n *\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UByteArray.asList():\n
List<UByte> {\n    return object : AbstractList<UByte>(), RandomAccess {\n    override val size: Int get() =\n
this@asList.size\n    override fun isEmpty(): Boolean = this@asList.isEmpty()\n    override fun\n
contains(element: UByte): Boolean = this@asList.contains(element)\n    override fun get(index: Int): UByte {\n
        AbstractList.checkElementIndex(index, size)\n        return this@asList[index]\n    }\n    override fun\n
indexOf(element: UByte): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is\n
UByte) return -1\n        return this@asList.indexOf(element)\n    }\n    override fun lastIndexOf(element:\n
UByte): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UByte) return -1\n
return this@asList.lastIndexOf(element)\n    }\n}\n}\n\n/**\n * Returns a [List] that wraps the original array.\n
*\n*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic actual fun UShortArray.asList(): List<UShort>\n
{\n    return object : AbstractList<UShort>(), RandomAccess {\n    override val size: Int get() = this@asList.size\n
override fun isEmpty(): Boolean = this@asList.isEmpty()\n    override fun contains(element: UShort):\n
Boolean = this@asList.contains(element)\n    override fun get(index: Int): UShort {\n
AbstractList.checkElementIndex(index, size)\n        return this@asList[index]\n    }\n    override fun\n
indexOf(element: UShort): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is\n
UShort) return -1\n        return this@asList.indexOf(element)\n    }\n    override fun lastIndexOf(element:\n
UShort): Int {\n        @Suppress("USELESS_CAST")\n        if ((element as Any?) !is UShort) return -1\n
return this@asList.lastIndexOf(element)\n    }\n}\n}\n\n"/*\n * Copyright 2010-2021 JetBrains s.r.o. and\n
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that\n
can be found in the license/LICENSE.txt file.\n *\n*\npackage kotlin.text\n\n// NOTE: THIS FILE IS AUTO-\n
GENERATED by the GenerateUnicodeData.kt\n// See:\n
https://github.com/JetBrains/kotlin/tree/master/libraries/stdlib\n\n// 9 ranges totally\n\n/**\n * Returns `true` if this\n
character is a whitespace.\n *\n*\ninternal fun Char.isWhitespaceImpl(): Boolean {\n    val ch = this.code\n    return ch\n
in 0x0009..0x000d\n        || ch in 0x001c..0x0020\n        || ch == 0x00a0\n        || ch > 0x1000 && (\n
ch == 0x1680\n        || ch in 0x2000..0x200a\n        || ch == 0x2028\n        || ch == 0x2029\n
|| ch == 0x202f\n        || ch == 0x205f\n        || ch == 0x3000\n        )\n}\n\n"/*\n * Copyright 2010-2020\n
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the\n
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n*\npackage kotlin\n\n\npublic actual fun

```

```

interface Comparator<T> {
    @JsName("compare")
    public actual fun compare(a: T, b: T): Int
}

```

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```

package
kotlin.js
import kotlin.annotation.AnnotationTarget.*
@Target(FUNCTION)
@Deprecated("Use inline extension function with body using dynamic")
public annotation class
nativeGetter
@Target(FUNCTION)
@Deprecated("Use inline extension function with body using dynamic")
public annotation class nativeSetter
@Target(FUNCTION)
@Deprecated("Use inline extension function with body using dynamic")
public annotation class nativeInvoke
@Target(CLASS, FUNCTION, PROPERTY)
internal annotation class library(public val name: String = "")
@Target(CLASS)
internal annotation class marker

```

**marker** Gives a declaration (a function, a property or a class) specific name in JavaScript. This may be useful in the following cases:

- There are two functions for which the compiler gives same name in JavaScript, you can mark one with `@JsName(...)` to prevent the compiler from reporting error.
- You are writing a JavaScript library in Kotlin. The compiler produces mangled names for functions with parameters, which is unnatural for usual JavaScript developer. You can put `@JsName(...)` on functions you want to be available from JavaScript.
- For some reason you want to rename declaration, e.g. there's common term in JavaScript for a concept provided by the declaration, which is uncommon in Kotlin.

**Example:**

```

kotlin
class Person(val name: String) {
    fun hello() {
        println("Hello $name!")
    }
    @JsName("helloWithGreeting")
    fun hello(greeting: String) {
        println("$greeting $name!")
    }
}

```

`@property name` the name which compiler uses both for declaration itself and for all references to the declaration. It's required to denote a valid JavaScript identifier.

```

@Retention(AnnotationRetention.BINARY)
@Target(CLASS, FUNCTION, PROPERTY, CONSTRUCTOR, PROPERTY_GETTER, PROPERTY_SETTER)
public actual annotation class JsName(actual val name: String)

```

**JsName** Denotes an `external` declaration that must be imported from native JavaScript library. The compiler produces the code relevant for the target module system, for example, in case of CommonJS, it will import the declaration via the `require(...)` function. The annotation can be used on top-level external declarations (classes, properties, functions) and files. In case of file (which can't be `external`) the following rule applies: all the declarations in the file must be `external`. By applying `@JsModule(...)` on a file you tell the compiler to import a JavaScript object that contain all the declarations from the file.

**Example:**

```

kotlin
@JsModule("jquery")
external abstract class JQuery() {
    // some declarations here
}
@JsModule("jquery")
external fun JQuery(element: Element): JQuery

```

`@property import name of a module to import declaration from.` It is not interpreted by the Kotlin compiler, it's passed as is directly to the target module system. @see `JsNonModule`

```

@Retention(AnnotationRetention.BINARY)
@Target(CLASS, PROPERTY, FUNCTION, FILE)
public annotation class JsModule(val import: String)

```

**JsModule** Denotes an `external` declaration that can be used without module system. By default, an `external` declaration is available regardless your target module system. However, by applying `[JsModule]` annotation you can make a declaration unavailable to `plain` module system. Some JavaScript libraries are distributed both as a standalone downloadable piece of JavaScript and as a module available as an npm package. To tell the Kotlin compiler to accept both cases, you can augment `[JsModule]` with the `@JsNonModule` annotation. For example:

```

kotlin
@JsModule("jquery")
@JsNonModule
@JsName("$")
external abstract class JQuery() {
    // some declarations here
}
@JsModule("jquery")
@JsNonModule
@JsName("$")
external fun JQuery(element: Element): JQuery

```

@see `JsModule`

```

@Retention(AnnotationRetention.BINARY)
@Target(CLASS, PROPERTY, FUNCTION, FILE)
public annotation class JsNonModule

```

**JsNonModule** Adds prefix to `external` declarations in a source file. JavaScript does not have concept of packages (namespaces). They are usually emulated by nested objects. The compiler turns references to `external` declarations either to plain unprefix names (in case of `plain` modules) or to plain imports. However, if a JavaScript library provides its declarations in packages, you won't be satisfied with this. You can tell the compiler to generate additional prefix before references to `external` declarations using the `@JsQualifier(...)` annotation. Note that a file



```

kotlin.collections\n\n**\n * Provides a skeletal implementation of the [MutableList] interface.\n *\n * @param E
the type of elements contained in the list. The list is invariant in its element type.\n *\n\npublic actual abstract class
AbstractMutableList<E> protected actual constructor() : AbstractMutableCollection<E>(), MutableList<E> {\n
protected var modCount: Int = 0\n\n abstract override fun add(index: Int, element: E): Unit\n abstract override
fun removeAt(index: Int): E\n abstract override fun set(index: Int, element: E): E\n\n /**\n * Adds the
specified element to the end of this list.\n *\n * @return `true` because the list is always modified as the result
of this operation.\n *\n actual override fun add(element: E): Boolean {\n checkIsMutable()\n add(size,
element)\n return true\n }\n\n actual override fun addAll(index: Int, elements: Collection<E>): Boolean {\n
AbstractList.checkPositionIndex(index, size)\n\n checkIsMutable()\n var _index = index\n var
changed = false\n for (e in elements) {\n add(_index++, e)\n changed = true\n }\n return
changed\n }\n\n actual override fun clear() {\n checkIsMutable()\n removeRange(0, size)\n }\n\n
actual override fun removeAll(elements: Collection<E>): Boolean {\n checkIsMutable()\n return
removeAll { it in elements }\n }\n\n actual override fun retainAll(elements: Collection<E>): Boolean {\n
checkIsMutable()\n return removeAll { it !in elements }\n }\n\n\n actual override fun iterator():
MutableIterator<E> = IteratorImpl()\n\n actual override fun contains(element: E): Boolean = indexOf(element) >=
0\n\n actual override fun indexOf(element: E): Int {\n for (index in 0..lastIndex) {\n if (get(index) ==
element) {\n return index\n }\n }\n return -1\n }\n\n actual override fun
lastIndexOf(element: E): Int {\n for (index in lastIndex downTo 0) {\n if (get(index) == element) {\n
return index\n }\n }\n return -1\n }\n\n\n actual override fun listIterator():
MutableListIterator<E> = listIterator(0)\n\n actual override fun listIterator(index: Int): MutableListIterator<E> =
ListIteratorImpl(index)\n\n\n actual override fun subList(fromIndex: Int, toIndex: Int): MutableList<E> =
SubList(this, fromIndex, toIndex)\n\n /**\n * Removes the range of elements from this list starting from
[fromIndex] and ending with but not including [toIndex].\n *\n\n protected open fun removeRange(fromIndex:
Int, toIndex: Int) {\n val iterator = listIterator(fromIndex)\n repeat(toIndex - fromIndex) {\n
iterator.next()\n iterator.remove()\n }\n }\n\n /**\n * Compares this list with another list instance
with the ordered structural equality.\n *\n * @return true, if [other] instance is a [List] of the same size, which
contains the same elements in the same order.\n *\n\n override fun equals(other: Any?): Boolean {\n if (other
=== this) return true\n if (other !is List<*>) return false\n return AbstractList.orderedEquals(this, other)\n
}\n\n /**\n * Returns the hash code value for this list.\n *\n\n override fun hashCode(): Int =
AbstractList.orderedHashCode(this)\n\n\n private open inner class IteratorImpl : MutableIterator<E> {\n /**
the index of the item that will be returned on the next call to [next]`() ` *\n protected var index = 0\n /** the
index of the item that was returned on the previous call to [next]`() ` *\n * or [ListIterator.previous]`() ` (for
`ListIterator`),\n * -1 if no such item exists\n *\n\n protected var last = -1\n\n override fun
hasNext(): Boolean = index < size\n\n override fun next(): E {\n if (!hasNext()) throw
NoSuchElementException()\n last = index++\n return get(last)\n }\n\n override fun remove()
{\n check(last != -1) { "Call next() or previous() before removing element from the iterator." }\n\n
removeAt(last)\n index = last\n last = -1\n }\n }\n\n /**\n * Implementation of
`MutableListIterator` for abstract lists.\n *\n\n private inner class ListIteratorImpl(index: Int) : IteratorImpl(),
MutableListIterator<E> {\n\n init {\n AbstractList.checkPositionIndex(index,
this@AbstractMutableList.size)\n this.index = index\n }\n\n override fun hasPrevious(): Boolean =
index > 0\n\n override fun nextIndex(): Int = index\n\n override fun previous(): E {\n if
(!hasPrevious()) throw NoSuchElementException()\n last = --index\n return get(last)\n }\n\n
override fun previousIndex(): Int = index - 1\n\n override fun add(element: E) {\n add(index, element)\n
index++\n last = -1\n }\n\n override fun set(element: E) {\n check(last != -1) { "Call
next() or previous() before updating element value with the iterator." }\n set(last, element)\n }\n }\n\n
private class SubList<E>(private val list: AbstractMutableList<E>, private val fromIndex: Int, toIndex: Int) :
AbstractMutableList<E>(), RandomAccess {\n private var _size: Int = 0\n\n init {\n
AbstractList.checkRangeIndexes(fromIndex, toIndex, list.size)\n this._size = toIndex - fromIndex\n }\n\n

```



```

this@AbstractMutableMap.clear()\n\n                override operator fun contains(element: V): Boolean =
containsValue(element)\n\n                override operator fun iterator(): MutableIterator<V> {\n                val
entryIterator = entries.iterator()\n                return object : MutableIterator<V> {\n                override fun
hasNext(): Boolean = entryIterator.hasNext()\n                override fun next(): V = entryIterator.next().value\n                override fun remove() = entryIterator.remove()\n                }\n                }\n\noverride val size: Int get() = this@AbstractMutableMap.size\n\n                override fun checkIsMutable(): Unit =
this@AbstractMutableMap.checkIsMutable()\n                }\n                }\n                return _values!!\n                }\n\n                actual
override fun remove(key: K): V? {\n                checkIsMutable()\n                val iter = entries.iterator()\n                while
(iter.hasNext()) {\n                val entry = iter.next()\n                val k = entry.key\n                if (key == k) {\n                val
value = entry.value\n                iter.remove()\n                return value\n                }\n                }\n                return null\n                }\n\n/**\n * This method is called every time when a mutating method is called on this mutable map.\n * Mutable
maps that are built (frozen) must throw `UnsupportedOperationException`.\n */\n\n                internal open fun
checkIsMutable(): Unit {\n                }\n                }\n                "/*\n                * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n                * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n                */\n                package kotlin.collections\n                /**\n                * Provides a skeletal implementation of the
[MutableSet] interface.\n                */\n                @param E the type of elements contained in the set. The set is invariant in its
element type.\n                */\n                public actual abstract class AbstractMutableSet<E> protected actual constructor() :
AbstractMutableCollection<E>(), MutableSet<E> {\n                /**\n                * Compares this set with another set instance with
the unordered structural equality.\n                */\n                @return `true`, if [other] instance is a [Set] of the same size, all
elements of which are contained in this set.\n                */\n                override fun equals(other: Any?): Boolean {\n                if (other
=== this) return true\n                if (other !is Set<*>) return false\n                return AbstractSet.setEquals(this, other)\n                }\n                }\n                /**\n                * Returns the hash code value for this set.\n                */\n                override fun hashCode(): Int =
AbstractSet.unorderedHashCode(this)\n                }\n                "/*\n                * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n                * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n                */\n                package kotlin.collections\n                /**\n                * Provides a [MutableList] implementation,
which uses a resizable array as its backing storage.\n                */\n                * This implementation doesn't provide a way to manage
capacity, as backing JS array is resizeable itself.\n                * There is no speed advantage to pre-allocating array sizes in
JavaScript, so this implementation does not include any of the\n                * capacity and "growth increment" concepts.\n                */\n                public actual open class ArrayList<E> internal constructor(private var array: Array<Any?>) :
AbstractMutableList<E>(), MutableList<E>, RandomAccess {\n                private var isReadOnly: Boolean = false\n                }\n                /**\n                * Creates an empty [ArrayList].\n                */\n                public actual constructor() : this(emptyArray()) {\n                }\n                /**\n                * Creates an empty [ArrayList].\n                */\n                @param initialCapacity initial capacity (ignored)\n                */\n                public actual
constructor(initialCapacity: Int) : this(emptyArray()) {\n                }\n                /**\n                * Creates an [ArrayList] filled from the
[elements] collection.\n                */\n                public actual constructor(elements: Collection<E>) :
this(elements.toArray<Any?>()) {\n                }\n                @PublishedApi\n                internal fun build(): List<E> {\n                checkIsMutable()\n                isReadOnly = true\n                return this\n                }\n                /** Does nothing in this ArrayList
implementation. */\n                public actual fun trimToSize() {\n                }\n                /** Does nothing in this ArrayList implementation.
*/\n                public actual fun ensureCapacity(minCapacity: Int) {\n                }\n                actual override val size: Int get() = array.size\n                @Suppress("UNCHECKED_CAST")\n                actual override fun get(index: Int): E = array[rangeCheck(index)] as E\n                actual override fun set(index: Int, element: E): E {\n                checkIsMutable()\n                rangeCheck(index)\n                @Suppress("UNCHECKED_CAST")\n                return array[index].apply { array[index] = element } as E\n                }\n                actual override fun add(element: E): Boolean {\n                checkIsMutable()\n                array.asDynamic().push(element)\n                modCount++\n                return true\n                }\n                actual override fun add(index: Int, element: E): Unit {\n                checkIsMutable()\n                array.asDynamic().splice(insertionRangeCheck(index), 0, element)\n                modCount++\n                }\n                actual override fun addAll(elements: Collection<E>): Boolean {\n                checkIsMutable()\n                if
(elements.isEmpty()) return false\n                array += elements.toArray<Any?>()\n                modCount++\n                return true\n                }\n                actual override fun addAll(index: Int, elements: Collection<E>): Boolean {\n                checkIsMutable()\n                insertionRangeCheck(index)\n                if (index == size) return addAll(elements)\n                if

```

```

(elements.isEmpty()) return false\n    when (index) {\n        size -> return addAll(elements)\n        0 -> array
= elements.toArray<Any?>() + array\n        else -> array = array.copyOfRange(0,
index).asDynamic().concat(elements.toArray<Any?>(), array.copyOfRange(index, size))\n    }\n\n
modCount++\n    return true\n }\n\n actual override fun removeAt(index: Int): E {\n    checkIsMutable()\n
rangeCheck(index)\n    modCount++\n    return if (index == lastIndex)\n        array.asDynamic().pop()\n
else\n        array.asDynamic().splice(index, 1)[0]\n }\n\n actual override fun remove(element: E): Boolean {\n
checkIsMutable()\n    for (index in array.indices) {\n        if (array[index] == element) {\n
array.asDynamic().splice(index, 1)\n            modCount++\n            return true\n        }\n    }\n    return
false\n }\n\n override fun removeRange(fromIndex: Int, toIndex: Int) {\n    checkIsMutable()\n
modCount++\n    array.asDynamic().splice(fromIndex, toIndex - fromIndex)\n }\n\n actual override fun
clear() {\n    checkIsMutable()\n    array = emptyArray()\n    modCount++\n }\n\n\n actual override fun
indexOf(element: E): Int = array.indexOf(element)\n\n actual override fun lastIndexOf(element: E): Int =
array.lastIndexOf(element)\n\n override fun toString() = arrayToString(array)\n\n
@Suppress("UNCHECKED_CAST")\n override fun <T> toArray(array: Array<T>): Array<T> {\n    if
(array.size < size) {\n        return toArray() as Array<T>\n    }\n\n    (this.array as
Array<T>).copyInto(array)\n\n    if (array.size > size) {\n        array[size] = null as T // null-terminate\n
}\n\n    return array\n }\n\n override fun toArray(): Array<Any?> {\n    return js("[ ]").slice.call(array)\n
}\n\n\n internal override fun checkIsMutable() {\n    if (isReadOnly) throw UnsupportedOperationException()\n
}\n\n private fun rangeCheck(index: Int) = index.apply {\n    AbstractList.checkElementIndex(index, size)\n
}\n\n private fun insertionRangeCheck(index: Int) = index.apply {\n    AbstractList.checkPositionIndex(index,
size)\n }\n}"/\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.collections\n\ninternal fun <T> sortArrayWith(array: Array<out T>, comparison: (T, T) -> Int)
{\n    if (getStableSortingIsSupported()) {\n        array.asDynamic().sort(comparison)\n    } else {\n
mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, Comparator(comparison))\n    }\n}\n\ninternal fun
<T> sortArrayWith(array: Array<out T>, comparator: Comparator<in T>) {\n    if (getStableSortingIsSupported())
{\n        val comparison = { a: T, b: T -> comparator.compare(a, b) }\n        array.asDynamic().sort(comparison)\n
    } else {\n        mergeSort(array.unsafeCast<Array<T>>(), 0, array.lastIndex, comparator)\n    }\n}\n\ninternal fun
<T> sortArrayWith(array: Array<out T>, fromIndex: Int, toIndex: Int, comparator: Comparator<in T>) {\n    if
(fromIndex < toIndex - 1) {\n        mergeSort(array.unsafeCast<Array<T>>(), fromIndex, toIndex - 1, comparator)\n
}\n}\n\ninternal fun <T : Comparable<T>> sortArray(array: Array<out T>) {\n    if
(getStableSortingIsSupported()) {\n        val comparison = { a: T, b: T -> a.compareTo(b) }\n
array.asDynamic().sort(comparison)\n    } else {\n        mergeSort(array.unsafeCast<Array<T>>(), 0,
array.lastIndex, naturalOrder())\n    }\n}\n\nprivate var _stableSortingIsSupported: Boolean? = null\nprivate fun
getStableSortingIsSupported(): Boolean {\n    _stableSortingIsSupported?.let { return it }\n
_stableSortingIsSupported = false\n\n    val array = js("[ ]").unsafeCast<Array<Int>>()\n    // known
implementations may use stable sort for arrays of up to 512 elements\n    // so we create slightly more elements to
test stability\n    for (index in 0 until 600) array.asDynamic().push(index)\n    val comparison = { a: Int, b: Int -> (a
and 3) - (b and 3) }\n    array.asDynamic().sort(comparison)\n    for (index in 1 until array.size) {\n        val a =
array[index - 1]\n        val b = array[index]\n        if ((a and 3) == (b and 3) && a >= b) return false\n    }\n
_stableSortingIsSupported = true\n    return true\n}\n\nprivate fun <T> mergeSort(array: Array<T>, start: Int,
endInclusive: Int, comparator: Comparator<in T>) {\n    val buffer =
arrayOfNulls<Any?>(array.size).unsafeCast<Array<T>>()\n    val result = mergeSort(array, buffer, start,
endInclusive, comparator)\n    if (result !== array) {\n        for (i in start..endInclusive) array[i] = result[i]\n
}\n}\n\n// Both start and end are inclusive indices.\nprivate fun <T> mergeSort(array: Array<T>, buffer: Array<T>,
start: Int, end: Int, comparator: Comparator<in T>): Array<T> {\n    if (start == end) {\n        return array\n    }\n
val median = (start + end) / 2\n    val left = mergeSort(array, buffer, start, median, comparator)\n    val right =
mergeSort(array, buffer, median + 1, end, comparator)\n    val target = if (left === buffer) array else buffer\n\n    //

```

```

Merge.\n    var leftIndex = start\n    var rightIndex = median + 1\n    for (i in start..end) {\n        when {\n            leftIndex <= median && rightIndex <= end -> {\n                val leftValue = left[leftIndex]\n                val rightValue = right[rightIndex]\n                if (comparator.compare(leftValue, rightValue) <= 0) {\n                    target[i] = leftValue\n                    leftIndex++\n                } else {\n                    target[i] = rightValue\n                    rightIndex++\n                }\n            }\n            leftIndex <= median -> {\n                target[i] = left[leftIndex]\n                leftIndex++\n            }\n            else /* rightIndex <= end */ -> {\n                target[i] = right[rightIndex]\n                rightIndex++\n            }\n        }\n    }\n    Unit // TODO: Fix KT-31506\n}\n}\n}\n}\nreturn target\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage\nkotlin.collections\n\n@OptIn(ExperimentalUnsignedTypes::class)\n@SinceKotlin("1.3")\n@kotlin.js.JsName("contentDeepHashCodeImpl")\ninternal fun <T> Array<out T>?.contentDeepHashCodeImpl(): Int {\n    if (this == null) return 0\n    var result = 1\n    for (element in this) {\n        val elementHash = when {\n            element == null -> 0\n            isArrayish(element) -> (element.unsafeCast<Array<*>>()).contentDeepHashCodeImpl()\n            element is UByteArray -> element.contentHashCode()\n            element is UShortArray -> element.contentHashCode()\n            element is UIntArray -> element.contentHashCode()\n            element is ULongArray -> element.contentHashCode()\n            else -> element.hashCode()\n        }\n        result = 31 * result + elementHash\n    }\n    return result\n}","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.collections\n\ninternal interface\nEqualityComparator {\n    /**\n     * Subclasses must override to return a value indicating whether or not two keys or values are equal.\n     */\n    abstract fun equals(value1: Any?, value2: Any?): Boolean\n\n    /**\n     * Subclasses must override to return the hash code of a given key.\n     */\n    abstract fun getHashCode(value: Any?): Int\n}\n\nobject HashCode : EqualityComparator {\n    override fun equals(value1: Any?, value2: Any?): Boolean = value1 == value2\n    override fun getHashCode(value: Any?): Int = value?.hashCode() ?: 0\n}\n}","/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n/*\n * Based on GWT AbstractHashMap\n * Copyright 2008 Google Inc.\n */\n\npackage kotlin.collections\n\nimport\nkotlin.collections.MutableMap.MutableEntry\n\n/**\n * Hash table based implementation of the [MutableMap] interface.\n *\n * This implementation makes no guarantees regarding the order of enumeration of [keys], [values] and [entries] collections.\n */\n\n// Classes that extend HashMap and implement `build()` (freezing) operation\n// have to make sure mutating methods check `checkIsMutable`.\n\npublic actual open class HashMap<K, V> : AbstractMutableMap<K, V>, MutableMap<K, V> {\n    private inner class EntrySet : AbstractEntrySet<MutableEntry<K, V>, K, V>() {\n        override fun add(element: MutableEntry<K, V>): Boolean = throw UnsupportedOperationException("Add is not supported on entries")\n        override fun clear() {\n            this@HashMap.clear()\n        }\n        override fun containsEntry(element: Map.Entry<K, V>): Boolean = this@HashMap.containsEntry(element)\n        override operator fun iterator(): MutableIterator<MutableEntry<K, V>> = internalMap.iterator()\n        override fun removeEntry(element: Map.Entry<K, V>): Boolean {\n            if (contains(element)) {\n                this@HashMap.remove(element.key)\n            }\n            return true\n        }\n        override val size: Int get() = this@HashMap.size\n    }\n\n    /**\n     * Internal implementation of the map: either string-based or hashcode-based.\n     */\n    private val internalMap: InternalMap<K, V>\n    private val equality: EqualityComparator\n\n    internal constructor(internalMap: InternalMap<K, V>) : super() {\n        this.internalMap = internalMap\n        this.equality = internalMap.equality\n    }\n\n    /**\n     * Constructs an empty [HashMap] instance.\n     */\n    actual constructor() : this(InternalHashCodeMap(EqualityComparator.HashCode))\n\n    /**\n     * Constructs an empty [HashMap] instance.\n     *\n     * @param initialCapacity the initial capacity (ignored)\n     * @param loadFactor the load factor (ignored)\n     *\n     * @throws IllegalArgumentException if the initial capacity or load factor are negative\n     */\n    actual constructor(initialCapacity: Int, loadFactor: Float) : this() {\n        // This implementation of HashMap has no need of load factors or capacities.\n        require(initialCapacity >= 0) {\n
```



```

*\ninternal class InternalHashMap<K, V>(override val equality: EqualityComparator) : InternalMap<K, V>
{\n\n private var backingMap: dynamic = createJsMap()\n override var size: Int = 0\n private set\n\n override fun put(key: K, value: V): V? {\n val hashCode = equality.getHashCode(key)\n val chainOrEntry
= getChainOrEntryOrNull(hashCode)\n if (chainOrEntry == null) {\n // This is a new chain, put it to the
map.\n backingMap[hashCode] = SimpleEntry(key, value)\n } else {\n if (chainOrEntry !is
Array<*>) {\n // It is an entry\n val entry: SimpleEntry<K, V> = chainOrEntry\n if
(equality.equals(entry.key, key)) {\n return entry.setValue(value)\n } else {\n
backingMap[hashCode] = arrayOf(entry, SimpleEntry(key, value))\n size++\n return null\n
}\n } else {\n // Chain already exists, perhaps key also exists.\n val chain:
Array<MutableEntry<K, V>> = chainOrEntry\n val entry = chain.findEntryInChain(key)\n if
(entry != null) {\n return entry.setValue(value)\n }\n }\n chain.asDynamic().push(SimpleEntry(key, value))\n }\n }\n size++\n// structureChanged(host)\n
return null\n }\n\n override fun remove(key: K): V? {\n val hashCode = equality.getHashCode(key)\n
val chainOrEntry = getChainOrEntryOrNull(hashCode) ?: return null\n if (chainOrEntry !is Array<*>) {\n
val entry: MutableEntry<K, V> = chainOrEntry\n if (equality.equals(entry.key, key)) {\n
jsDeleteProperty(backingMap, hashCode)\n size--\n return entry.value\n } else {\n
return null\n }\n } else {\n val chain: Array<MutableEntry<K, V>> = chainOrEntry\n for
(index in chain.indices) {\n val entry = chain[index]\n if (equality.equals(key, entry.key)) {\n
if (chain.size == 1) {\n chain.asDynamic().length = 0\n // remove the whole
array\n jsDeleteProperty(backingMap, hashCode)\n } else {\n // splice out
the entry we're removing\n chain.asDynamic().splice(index, 1)\n }\n size--\n//
structureChanged(host)\n return entry.value\n }\n }\n }\n return null\n
}\n\n override fun clear() {\n backingMap = createJsMap()\n size = 0\n }\n\n override fun
contains(key: K): Boolean = getEntry(key) != null\n\n override fun get(key: K): V? = getEntry(key)?.value\n
private fun getEntry(key: K): MutableEntry<K, V>? {\n val chainOrEntry =
getChainOrEntryOrNull(equality.getHashCode(key)) ?: return null\n if (chainOrEntry !is Array<*>) {\n
val entry: MutableEntry<K, V> = chainOrEntry\n if (equality.equals(entry.key, key)) {\n return
entry\n } else {\n return null\n }\n } else {\n val chain: Array<MutableEntry<K,
V>> = chainOrEntry\n return chain.findEntryInChain(key)\n }\n }\n\n private fun
Array<MutableEntry<K, V>>.findEntryInChain(key: K): MutableEntry<K, V>? =\n firstOrNull { entry ->
equality.equals(entry.key, key) }\n\n override fun iterator(): MutableIterator<MutableEntry<K, V>> {\n\n
return object : MutableIterator<MutableEntry<K, V>> {\n var state = -1 // -1 not ready, 0 - ready, 1 -
done\n\n val keys: Array<String> = js("Object").keys(backingMap)\n var keyIndex = -1\n\n
var chainOrEntry: dynamic = null\n var isChain = false\n var itemIndex = -1\n var lastEntry:
MutableEntry<K, V>? = null\n\n private fun computeNext(): Int {\n if (chainOrEntry != null &&
isChain) {\n val chainSize: Int = chainOrEntry.unsafeCast<Array<MutableEntry<K, V>>>().size\n
if (++itemIndex < chainSize)\n return 0\n }\n\n if (++keyIndex < keys.size)
{\n chainOrEntry = backingMap[keys[keyIndex]]\n isChain = chainOrEntry is Array<*>\n
itemIndex = 0\n return 0\n } else {\n chainOrEntry = null\n
return 1\n }\n }\n\n override fun hasNext(): Boolean {\n if (state == -1)\n state = computeNext()\n return state == 0\n }\n\n override fun next(): MutableEntry<K, V>
{\n if (!hasNext()) throw NoSuchElementException()\n val lastEntry = if (isChain) {\n
chainOrEntry.unsafeCast<Array<MutableEntry<K, V>>>()[itemIndex]\n } else {\n
chainOrEntry.unsafeCast<MutableEntry<K, V>>()\n }\n this.lastEntry = lastEntry\n
state = -1\n return lastEntry\n }\n\n override fun remove() {\n
checkNotNull(lastEntry)\n this@InternalHashMap.remove(lastEntry!!.key)\n lastEntry =
null\n // the chain being iterated just got modified by InternalHashMap.remove\n itemIndex--
}\n }\n }\n }\n\n private fun getChainOrEntryOrNull(hashCode: Int): dynamic {\n val

```

```

chainOrEntry = backingMap[hashCode]\n    return if (chainOrEntry === undefined) null else chainOrEntry\n
}\n}\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.collections\n\n/**\n * The common interface of [InternalStringMap] and
[InternalHashMap].\n * \ninternal interface InternalMap<K, V> :
MutableIterable<MutableMap.MutableEntry<K, V>> {\n    val equality: EqualityComparator\n    val size: Int\n
operator fun contains(key: K): Boolean\n    operator fun get(key: K): V?\n    fun put(key: K, value: V): V?\n    fun
remove(key: K): V?\n    fun clear(): Unit\n    fun createJsMap(): dynamic {\n        val result =
js("Object.create(null)")\n        // force to switch object representation to dictionary mode\n        result["foo"] =
1\n        jsDeleteProperty(result, "foo")\n        return result\n    }\n}\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n * \n\n\n * Based on GWT InternalStringMap\n * Copyright
2008 Google Inc.\n * \npackage kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n
* A simple wrapper around JavaScript Map for key type is string.\n * \n * Though this map is instantiated only with
K=String, the K type is not fixed to String statically,\n * because we want to have it erased to Any? in order not to
generate type-safe override bridges for\n * [get], [contains], [remove] etc, if they ever are generated.\n * \ninternal
class InternalStringMap<K, V>(override val equality: EqualityComparator) : InternalMap<K, V> {\n    private var
backingMap: dynamic = createJsMap()\n    override var size: Int = 0\n    private set\n\n    /**\n     * A mod
count to track 'value' replacements in map to ensure that the 'value' that we have in the\n     * iterator entry is
guaranteed to be still correct.\n     * This is to optimize for the common scenario where the values are not modified
during\n     * iterations where the entries are never stale.\n     * \nprivate var valueMod: Int = 0\n    override
operator fun contains(key: K): Boolean {\n        if (key !is String) return false\n        return backingMap[key] !==
undefined\n    }\n    override operator fun get(key: K): V? {\n        if (key !is String) return null\n        val value =
backingMap[key]\n        return if (value !== undefined) value.unsafeCast<V>() else null\n    }\n\n    override fun
put(key: K, value: V): V? {\n        require(key is String)\n        val oldValue = backingMap[key]\n        backingMap[key] = value\n        if (oldValue === undefined) {\n            size++\n\n            structureChanged(host)\n            return null\n        } else {\n            valueMod++\n            return
oldValue.unsafeCast<V>()\n        }\n    }\n\n    override fun remove(key: K): V? {\n        if (key !is String) return
null\n        val value = backingMap[key]\n        if (value !== undefined) {\n            jsDeleteProperty(backingMap,
key)\n            size--\n\n            structureChanged(host)\n            return value.unsafeCast<V>()\n        } else {\n            valueMod++\n            return null\n        }\n    }\n\n    override fun clear() {\n        backingMap = createJsMap()\n        size = 0\n    }\n\n    override fun iterator(): MutableIterator<MutableEntry<K, V>> {\n        return object :
MutableIterator<MutableEntry<K, V>> {\n            private val keys: Array<String> =
js("Object").keys(backingMap)\n            private val iterator = keys.iterator()\n            private var lastKey: String? =
null\n\n            override fun hasNext(): Boolean = iterator.hasNext()\n\n            override fun next():
MutableEntry<K, V> {\n                val key = iterator.next()\n                lastKey = key\n                @Suppress("UNCHECKED_CAST")\n                return newMapEntry(key as K)\n            }\n\n            override
fun remove() {\n                @Suppress("UNCHECKED_CAST")\n                this@InternalStringMap.remove(checkNotNull(lastKey) as K)\n            }\n        }\n    }\n\n    private fun
newMapEntry(key: K): MutableEntry<K, V> = object : MutableEntry<K, V> {\n        override val key: K get() =
key\n        override val value: V get() = this@InternalStringMap[key].unsafeCast<V>()\n\n        override fun
setValue(newValue: V): V = this@InternalStringMap.put(key, newValue).unsafeCast<V>()\n\n        override fun
hashCode(): Int = AbstractMap.entryHashCode(this)\n        override fun toString(): String =
AbstractMap.entryToString(this)\n        override fun equals(other: Any?): Boolean = AbstractMap.entryEquals(this,
other)\n    }\n}\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\n\n * Based on GWT LinkedHashMap\n * Copyright 2008 Google Inc.\n * \npackage
kotlin.collections\n\nimport kotlin.collections.MutableMap.MutableEntry\n\n/**\n * Hash table based

```

implementation of the [MutableMap] interface, which additionally preserves the insertion order of entries during the iteration. The insertion order is preserved by maintaining a doubly-linked list of all of its entries.

public actual open class LinkedHashMap<K, V> : HashMap<K, V>, MutableMap<K, V> {
 /\*\* The entry we use includes next/prev pointers for a doubly-linked circular list with a head node. This reduces the special cases we have to deal with in the list operations. Note that we duplicate the key from the underlying hash map so we can find the eldest entry. The alternative would have been to modify HashMap so more of the code was directly usable here, but this would have added some overhead to HashMap, or to reimplement most of the HashMap code here with small modifications. Paying a small storage cost only if you use LinkedHashMap and minimizing code size seemed like a better tradeoff.
 private inner class ChainEntry<K, V>(key: K, value: V) : AbstractMutableMap.SimpleEntry<K, V>(key, value) {
 internal var next: ChainEntry<K, V>? = null
 internal var prev: ChainEntry<K, V>? = null
 override fun setValue(newValue: V): V {
 this@LinkedHashMap.checkIsMutable()
 return super.setValue(newValue)
 }
 private inner class EntrySet : AbstractEntrySet<MutableEntry<K, V>, K, V>() {
 private inner class EntryIterator : MutableIterator<MutableEntry<K, V>>() {
 // The last entry that was returned from this iterator.
 private var last: ChainEntry<K, V>? = null
 // The next entry to return from this iterator.
 private var next: ChainEntry<K, V>? = null
 init {
 next = head
 }
 recordLastKnownStructure(map, this)
 override fun hasNext(): Boolean {
 return next != null
 }
 override fun next(): MutableEntry<K, V> {
 // Check structural change
 checkStructuralChange(map, this)
 if (!hasNext()) throw NoSuchElementException()
 val current = next!!
 last = current
 next = current.next.takeIf { it != head }
 return current
 }
 override fun remove() {
 check(last != null)
 this@EntrySet.checkIsMutable()
 checkStructuralChange(map, this)
 last!!.remove()
 map.remove(last!!.key)
 recordLastKnownStructure(map, this)
 last = null
 }
 override fun add(element: MutableEntry<K, V>): Boolean = throw UnsupportedOperationException("Add is not supported on entries")
 override fun clear() {
 this@LinkedHashMap.clear()
 }
 override fun containsEntry(element: Map.Entry<K, V>): Boolean = this@LinkedHashMap.containsEntry(element)
 override operator fun iterator(): MutableIterator<MutableEntry<K, V>> = EntryIterator()
 override fun removeEntry(element: Map.Entry<K, V>): Boolean {
 checkIsMutable()
 if (contains(element)) {
 this@LinkedHashMap.remove(element.key)
 return true
 }
 return false
 }
 override val size: Int get() = this@LinkedHashMap.size
 override fun checkIsMutable(): Unit = this@LinkedHashMap.checkIsMutable()
 }
 /\*\* The head of the insert order chain, which is a doubly-linked circular list.
 \* The most recently inserted node is at the end of the chain, ie. chain.prev.
 \* Add this node to the end of the chain.
 \* private fun ChainEntry<K, V>.addToEnd() {
 // This entry is not in the list.
 check(next == null && prev == null)
 val \_head = head
 if (\_head == null) {
 head = this
 next = this
 prev = this
 } else {
 // Chain is valid.
 val \_tail = checkNotNull(\_head.prev)
 // Update me.
 prev = \_tail
 next = \_head
 // Update my new siblings: current head and old tail.
 \_head.prev = this
 \_tail.next = this
 }
 }
 /\*\* Remove this node from the chain it is a part of.
 \* private fun ChainEntry<K, V>.remove() {
 if (this.next === this) {
 // if this is single element, remove head
 head = null
 } else {
 if (head === this) {
 // if this is first element, move head to next
 head = next
 }
 next!!.prev = prev
 prev!!.next = next
 }
 next = null
 prev = null
 }
 /\*\* The hashmap that keeps track of our entries and the chain. Note that we duplicate the key here to eliminate changes to HashMap and minimize the code here, at the expense of additional space.
 \* private val map: HashMap<K, ChainEntry<K, V>>
 \* private var isReadOnly: Boolean = false
 \* Constructs an empty [LinkedHashMap] instance.
 \* actual constructor() : super() {
 map = HashMap<K, ChainEntry<K, V>>()
 }
 internal constructor(backingMap: HashMap<K, Any>) : super() {
 @Suppress("UNCHECKED\_CAST") // expected



```

kotlin.contracts.*\n\n@DeprecatedSinceKotlin(warningSince = \"1.6\")\n@Deprecated(\"Synchronization on any
object is not supported in Kotlin/JS\",
ReplaceWith(\"run(block)\"))\n@kotlin.internal.InlineOnly\n@Suppress(\"UNUSED_PARAMETER\")\npublic
inline fun <R> synchronized(lock: Any, block: () -> R): R {\n    contract {\n        callsInPlace(block,
InvocationKind.EXACTLY_ONCE)\n    }\n    return block()\n}\n\n\",/*\n * Copyright 2010-2018 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.io\n\ninternal abstract class BaseOutput {\n
open fun println() {\n    print(\"\\n\")\n }\n\n open fun println(message: Any?) {\n    print(message)\n
println()\n }\n\n abstract fun print(message: Any?)\n\n open fun flush() {\n}\n\n/** JsName used to make the
declaration available outside of module to test it */\n\n@JsName(\"NodeJsOutput\")\ninternal class NodeJsOutput(val
outputStream: dynamic) : BaseOutput() {\n    override fun print(message: Any?) {\n        // TODO: Using local
variable because of bug in block decomposition lowering in IR backend\n        val messageString =
String(message)\n        outputStream.write(messageString)\n    }\n}\n\n/** JsName used to make the declaration
available outside of module to test it */\n\n@JsName(\"OutputToConsoleLog\")\ninternal class OutputToConsoleLog
: BaseOutput() {\n    override fun print(message: Any?) {\n        console.log(message)\n    }\n\n override fun
println(message: Any?) {\n        console.log(message)\n    }\n\n override fun println() {\n        console.log(\"\")\n
}\n}\n\n/** JsName used to make the declaration available outside of module to test it and use at try.kotl.in
*/\n\n@JsName(\"BufferedOutput\")\ninternal open class BufferedOutput : BaseOutput() {\n    var buffer = \"\"\n\n
override fun print(message: Any?) {\n        buffer += String(message)\n    }\n\n override fun flush() {\n        buffer
= \"\"\n    }\n}\n\n/** JsName used to make the declaration available outside of module to test it
*/\n\n@JsName(\"BufferedOutputToConsoleLog\")\ninternal class BufferedOutputToConsoleLog : BufferedOutput()\n
{\n    override fun print(message: Any?) {\n        var s = String(message)\n        val i = s.nativeLastIndexOf(\"\n\",
0)\n        if (i >= 0) {\n            buffer += s.substring(0, i)\n            flush()\n            s = s.substring(i + 1)\n        }\n
buffer += s\n    }\n\n override fun flush() {\n        console.log(buffer)\n        buffer = \"\"\n    }\n}\n\n/** JsName
used to make the declaration available outside of module to test it and use at try.kotl.in
*/\n\n@JsName(\"output\")\ninternal var output = run {\n    val isNode: Boolean = js(\"typeof process !== 'undefined'
&& process.versions && !process.versions.node\")\n    if (isNode) NodeJsOutput(js(\"process.stdout\")) else
BufferedOutputToConsoleLog()\n}\n\n@kotlin.internal.InlineOnly\nprivate inline fun String(value: Any?): String =
js(\"String\")(value)\n\n/** Prints the line separator to the standard output stream. */\n\npublic actual fun println() {\n
output.println()\n}\n\n/** Prints the given [message] and the line separator to the standard output stream. */\n\npublic
actual fun println(message: Any?) {\n    output.println(message)\n}\n\n/** Prints the given [message] to the standard
output stream. */\n\npublic actual fun print(message: Any?) {\n
output.print(message)\n}\n\n@SinceKotlin(\"1.6\")\npublic actual fun readln(): String = throw
UnsupportedOperationException(\"readln is not supported in Kotlin/JS\")\n\n@SinceKotlin(\"1.6\")\npublic actual
fun readlnOrNull(): String? = throw UnsupportedOperationException(\"readlnOrNull is not supported in
Kotlin/JS\"),/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.intrinsics.CoroutineSingletons.*\nimport
kotlin.coroutines.intrinsics.COROUTINE_SUSPENDED\n\n@PublishedApi\n@SinceKotlin(\"1.3\")\ninternal
actual class SafeContinuation<in T>\n\ninternal actual constructor(\n    private val delegate: Continuation<T>,\n
initialResult: Any?\n) : Continuation<T> {\n    @PublishedApi\n    internal actual constructor(delegate:
Continuation<T>) : this(delegate, UNDECIDED)\n\n    public actual override val context: CoroutineContext\n
get() = delegate.context\n\n    private var result: Any? = initialResult\n\n    public actual override fun
resumeWith(result: Result<T>) {\n        val cur = this.result\n        when {\n            cur === UNDECIDED -> {\n
                this.result = result.value\n            }\n            cur === COROUTINE_SUSPENDED -> {\n                this.result =
RESUMED\n                delegate.resumeWith(result)\n            }\n            else -> throw
IllegalStateException(\"Already resumed\")\n        }\n    }\n\n    @PublishedApi\n    internal actual fun
getOrThrow(): Any? {\n        if (result === UNDECIDED) {\n            result = COROUTINE_SUSPENDED\n

```



```

Date.LocaleOptions() -> Unit): Date.LocaleOptions {
    val result = js("new
Object()").unsafeCast<Date.LocaleOptions>()
    init(result)
    return result
}"/**
 * Copyright 2010-2020
JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.dom
import org.w3c.dom.Document
import org.w3c.dom.Element
import kotlin.internal.LowPriorityInOverloadResolution
import kotlinx.dom.appendChild as
newAppendElement
import kotlinx.dom.createElement as newCreateElement
/**
 * Creates a new element
with the specified [name].
 *
 * The element is initialized with the specified [init] function.
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API is moved to another package,
use 'kotlinx.dom.createElement' instead.",
    replaceWith = ReplaceWith("this.createElement(name, init)"),
    "kotlinx.dom.createElement")
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
public inline fun Document.createElement(name: String, noinline init: Element.() -> Unit): Element =
    this.newCreateElement(name, init)
/**
 * Appends a newly created element with the specified [name] to this
element.
 *
 * The element is initialized with the specified [init] function.
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API is moved to another package,
use 'kotlinx.dom.appendChild' instead.",
    replaceWith = ReplaceWith("this.appendChild(name, init)"),
    "kotlinx.dom.appendChild")
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
public inline fun Element.appendChild(name: String, noinline init: Element.() -> Unit): Element =
    this.newAppendElement(name, init)
"/**
 * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.
 */
package kotlin.dom
import org.w3c.dom.Element
import kotlin.internal.LowPriorityInOverloadResolution
import kotlinx.dom.addClass as newAddClass
import kotlinx.dom.hasClass as newHasClass
import kotlinx.dom.removeClass as newRemoveClass
/**
 * Returns true if
the element has the given CSS class style in its 'class' attribute
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API is moved to another package,
use 'kotlinx.dom.hasClass' instead.",
    replaceWith = ReplaceWith("this.hasClass(cssClass)"),
    "kotlinx.dom.hasClass")
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
inline fun Element.hasClass(cssClass: String): Boolean = this.newHasClass(cssClass)
/**
 * Adds CSS class to element.
Has no effect if all specified classes are already in class attribute of the element
 *
 * @return true if at least one
class has been added
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API is moved
to another package, use 'kotlinx.dom.addClass' instead.",
    replaceWith =
    ReplaceWith("this.addClass(cssClasses)", "kotlinx.dom.addClass")
)
@DeprecatedSinceKotlin(warningSince
= "1.4", errorSince = "1.6")
inline fun Element.addClass(vararg cssClasses: String): Boolean =
    this.newAddClass(*cssClasses)
/**
 * Removes all [cssClasses] from element. Has no effect if all specified
classes are missing in class attribute of the element
 *
 * @return true if at least one class has been removed
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API is moved to another package,
use 'kotlinx.dom.removeClass' instead.",
    replaceWith = ReplaceWith("this.removeClass(cssClasses)"),
    "kotlinx.dom.removeClass")
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
inline fun Element.removeClass(vararg cssClasses: String): Boolean = this.newRemoveClass(*cssClasses)
"/**
 * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.dom
import org.w3c.dom.Element
import org.w3c.dom.Node
import kotlin.internal.LowPriorityInOverloadResolution
import kotlinx.dom.isElement as newIsElement
import kotlinx.dom.isText as newIsText
/**
 * Gets a value indicating whether this node is a TEXT_NODE or a
CDATA_SECTION_NODE.
 */
@LowPriorityInOverloadResolution
@Deprecated(
    message = "This API
is moved to another package, use 'kotlinx.dom.isText' instead.",
    replaceWith = ReplaceWith("this.isText"),
    "kotlinx.dom.isText")
@DeprecatedSinceKotlin(warningSince = "1.4", errorSince = "1.6")
public val Node.isText: Boolean
    inline get() = this.newIsText()
/**
 * Gets a value indicating whether this node is an

```

```

[Element].\n *\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to
another package, use 'kotlinx.dom.isElement' instead.\",\n replaceWith = ReplaceWith(\"this.isElement\",
\"kotlinx.dom.isElement\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\npublic val
Node.isElement: Boolean\n inline get() = this.newIsElement\n\", /*\n * Copyright 2010-2018 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n *\n\npackage org.w3c.dom.events\n\npublic fun
EventListener(handler: (Event) -> Unit): EventListener = EventListenerHandler(handler)\n\nprivate class
EventListenerHandler(private val handler: (Event) -> Unit) : EventListener {\n public override fun
handleEvent(event: Event) {\n handler(event)\n }\n\n public override fun toString(): String =
\"EventListenerHandler($handler)\"\n}\n\", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage org.w3c.dom\n\npublic external interface ItemArrayLike<out T> {\n
val length: Int\n fun item(index: Int): T?\n}\n\n/**\n * Returns the view of this `ItemArrayLike<T>` collection as
`List<T>`\n *\n\npublic fun <T> ItemArrayLike<T>.asList(): List<T> = object : AbstractList<T>() {\n override val
size: Int get() = this@asList.length\n\n override fun get(index: Int): T = when (index) {\n in 0..lastIndex ->
this@asList.item(index).unsafeCast<T>()\n else -> throw IndexOutOfBoundsException(\"index $index is not in
range [0..$lastIndex]\")\n }\n}\n\", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage kotlin.dom\n\nimport org.w3c.dom.Element\nimport
org.w3c.dom.Node\nimport kotlin.internal.LowPriorityInOverloadResolution\nimport kotlinx.dom.appendText as
newAppendText\nimport kotlinx.dom.clear as newClear\n\n/** Removes all the children from this node.
*\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to another package,
use 'kotlinx.dom.clear' instead.\",\n replaceWith = ReplaceWith(\"this.clear()\",
\"kotlinx.dom.clear\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\npublic inline fun
Node.clear() = this.newClear()\n\n/**\n * Creates text node and append it to the element.\n *\n * @return this
element\n *\n\n@LowPriorityInOverloadResolution\n@Deprecated(\n message = \"This API is moved to another
package, use 'kotlinx.dom.appendText' instead.\",\n replaceWith = ReplaceWith(\"this.appendText(text)\",
\"kotlinx.dom.appendText\")\n)\n@DeprecatedSinceKotlin(warningSince = \"1.4\", errorSince = \"1.6\")\ninline fun
Element.appendText(text: String): Element = this.newAppendText(text)\n\", /*\n * Copyright 2010-2018 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n *\n\npackage kotlin.js\n\n/**\n * Reinterprets this value
as a value of the [dynamic type](/docs/reference/dynamic-type.html).\n *\n\n@kotlin.internal.InlineOnly\npublic
inline fun Any?.asDynamic(): dynamic = this\n\n/**\n * Reinterprets this value as a value of the specified type [T]
without any actual type checking.\n *\n\n@kotlin.internal.InlineOnly\npublic inline fun <T> Any?.unsafeCast():
@kotlin.internal.NoInfer T = this.asDynamic()\n\n/**\n * Reinterprets this `dynamic` value as a value of the
specified type [T] without any actual type checking.\n *\n\n@kotlin.internal.DynamicExtension\n@JsName(\"unsafeCastDynamic\")\n@kotlin.internal.InlineOnly\npublic
inline fun <T> dynamic.unsafeCast(): @kotlin.internal.NoInfer T = this\n\n/**\n * Allows to iterate this `dynamic`
object in the following cases:\n * - when it has an `iterator` function,\n * - when it is an array\n * - when it is an
instance of [kotlin.collections.Iterable]\n *\n\n@kotlin.internal.DynamicExtension\npublic operator fun
dynamic.iterator(): Iterator<dynamic> {\n val r: Any? = this\n return when {\n this[\"iterator\"] != null ->
this[\"iterator\"]()\n isArrayish(r) -> r.unsafeCast<Array<*>>().iterator()\n else ->
(r as Iterable<*>).iterator()\n }\n}\n\", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\n// a package is omitted to get declarations directly under the
module\n\n@JsName(\"throwNPE\")\ninternal fun throwNPE(message: String) {\n throw
NullPointerException(message)\n}\n\n@JsName(\"throwCCE\")\ninternal fun throwCCE() {\n throw
ClassCastException(\"Illegal cast\")\n}\n\n@JsName(\"throwISE\")\ninternal fun throwISE(message: String) {\n

```

```

throw IllegalStateException(message)\n}\n\n@JsName("throwUPAE")\ninternal fun throwUPAE(propertyName:
String) {\n    throw UninitializedPropertyAccessException("lateinit property ${propertyName} has not been
initialized")\n}\n"/\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\npackage kotlin.collections\n\n/**\n * Groups elements from the [Grouping] source by key and counts elements
in each group.\n * \n * @return a [Map] associating the key of each group with the count of elements in the group.\n
*\n * @sample samples.collections.Grouping.groupingByEachCount\n */\n@SinceKotlin("1.1")\npublic actual fun
<T, K> Grouping<T, K>.eachCount(): Map<K, Int> =\n    fold(0) { acc, _ -> acc + 1 }\n\n/**\n * Groups
elements from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements
in each group.\n * \n * @return a [Map] associating the key of each group with the count of element in the group.\n
*\n * @SinceKotlin("1.1")\npublic inline fun <T, K> Grouping<T, K>.eachSumOf(valueSelector: (T) -> Int):
Map<K, Int> =\n    fold(0) { acc, e -> acc + valueSelector(e) }\n"/\n * Copyright 2010-2018 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmName("GroupingKt")\n@file:kotlin.jvm.JvmMultifileClass\npackage
kotlin.collections\n\n/**\n * Represents a source of elements with a [keyOf] function, which can be applied to each
element to get its key.\n * \n * A [Grouping] structure serves as an intermediate step in group-and-fold operations:\n
* they group elements by their keys and then fold each group with some aggregating operation.\n * \n * It is created
by attaching `keySelector: (T) -> K` function to a source of elements.\n * To get an instance of [Grouping] use one
of `groupingBy` extension functions:\n * - [Iterable.groupingBy]\n * - [Sequence.groupingBy]\n * -
[Array.groupingBy]\n * - [CharSequence.groupingBy]\n * \n * For the list of group-and-fold operations available,
see the [extension functions](#extension-functions) for `Grouping`.\n */\n@SinceKotlin("1.1")\npublic interface
Grouping<T, out K> {\n    /** Returns an [Iterator] over the elements of the source of this grouping. *\n    fun
sourceIterator(): Iterator<T>\n    /** Extracts the key of an [element]. *\n    fun keyOf(element: T): K\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the elements of each group
sequentially,\n * passing the previously accumulated value and the current element as arguments, and stores the
results in a new map.\n * \n * The key for each element is provided by the [Grouping.keyOf] function.\n * \n *
@param operation function is invoked on each element with the following parameters:\n * - `key`: the key of the
group this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group, can be `null`
if it's the first `element` encountered in the group;\n * - `element`: the element from the source being aggregated;\n
* - `first`: indicates whether it's the first `element` encountered in the group.\n * \n * @return a [Map] associating
the key of each group with the result of aggregation of the group elements.\n * \n * @sample
samples.collections.Grouping.aggregateByRadix\n */\n@SinceKotlin("1.1")\npublic inline fun <T, K, R>
Grouping<T, K>.aggregate(\n    operation: (key: K, accumulator: R?, element: T, first: Boolean) -> R\n): Map<K,
R> {\n    return aggregateTo(mutableMapOf<K, R>(), operation)\n}\n\n/**\n * Groups elements from the
[Grouping] source by key and applies [operation] to the elements of each group sequentially,\n * passing the
previously accumulated value and the current element as arguments,\n * and stores the results in the given
[destination] map.\n * \n * The key for each element is provided by the [Grouping.keyOf] function.\n * \n *
@param operation a function that is invoked on each element with the following parameters:\n * - `key`: the key of the group
this element belongs to;\n * - `accumulator`: the current value of the accumulator of the group, can be `null` if it's
the first `element` encountered in the group;\n * - `element`: the element from the source being aggregated;\n * -
`first`: indicates whether it's the first `element` encountered in the group.\n * \n * If the [destination] map already has
a value corresponding to some key,\n * then the elements being aggregated for that key are never considered as
`first`.\n * \n * @return the [destination] map associating the key of each group with the result of aggregation of the
group elements.\n * \n * @sample samples.collections.Grouping.aggregateByRadixTo\n
*/\n@SinceKotlin("1.1")\npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T,
K>.aggregateTo(\n    destination: M,\n    operation: (key: K, accumulator: R?, element: T, first: Boolean) -> R\n): M
{\n    for (e in this.sourceIterator()) {\n        val key = keyOf(e)\n        val accumulator = destination[key]\n

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destination[key] = operation(key, accumulator, e, accumulator == null && !destination.containsKey(key))\n }
return destination\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies [operation] to the
elements of each group sequentially,\n * passing the previously accumulated value and the current element as
arguments, and stores the results in a new map.\n * An initial value of accumulator is provided by
[initialValueSelector] function.\n *\n * @param initialValueSelector a function that provides an initial value of
accumulator for each group.\n * It's invoked with parameters:\n * - `key`: the key of the group;\n * - `element`: the
first element being encountered in that group.\n *\n * @param operation a function that is invoked on each element
with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * - `accumulator`: the
current value of the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n
*\n * @return a [Map] associating the key of each group with the result of accumulating the group elements.\n *
@\n * @sample samples.collections.Grouping.foldByEvenLengthWithComputedInitialValue\n
*/\n\n@SinceKotlin("1.1")\npublic inline fun <T, K, R> Grouping<T, K>.fold(\n    initialValueSelector: (key: K,
element: T) -> R,\n    operation: (key: K, accumulator: R, element: T) -> R\n): Map<K, R> =\n    @Suppress("UNCHECKED_CAST")\n    aggregate { key, acc, e, first -> operation(key, if (first)
initialValueSelector(key, e) else acc as R, e) }\n}\n\n/**\n * Groups elements from the [Grouping] source by key and
applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the
current element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of
accumulator is provided by [initialValueSelector] function.\n *\n * @param initialValueSelector a function that
provides an initial value of accumulator for each group.\n * It's invoked with parameters:\n * - `key`: the key of the
group;\n * - `element`: the first element being encountered in that group.\n *\n * If the [destination] map already has
a value corresponding to some key, that value is used as an initial value of\n * the accumulator for that group and the
[initialValueSelector] function is not called for that group.\n *\n * @param operation a function that is invoked on
each element with the following parameters:\n * - `key`: the key of the group this element belongs to;\n * -
`accumulator`: the current value of the accumulator of the group;\n * - `element`: the element from the source being
accumulated.\n *\n * @return the [destination] map associating the key of each group with the result of
accumulating the group elements.\n * @sample
samples.collections.Grouping.foldByEvenLengthWithComputedInitialValueTo\n */\n\n@SinceKotlin("1.1")\npublic
inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(\n    destination: M,\n
initialValueSelector: (key: K, element: T) -> R,\n    operation: (key: K, accumulator: R, element: T) -> R\n): M =\n    @Suppress("UNCHECKED_CAST")\n    aggregateTo(destination) { key, acc, e, first -> operation(key, if (first)
initialValueSelector(key, e) else acc as R, e) }\n}\n\n/**\n * Groups elements from the [Grouping] source by key and
applies [operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the
current element as arguments, and stores the results in a new map.\n * An initial value of accumulator is the same
[initialValue] for each group.\n *\n * @param operation a function that is invoked on each element with the
following parameters:\n * - `accumulator`: the current value of the accumulator of the group;\n * - `element`: the
element from the source being accumulated.\n *\n * @return a [Map] associating the key of each group with the
result of accumulating the group elements.\n * @sample
samples.collections.Grouping.foldByEvenLengthWithConstantInitialValue\n */\n\n@SinceKotlin("1.1")\npublic
inline fun <T, K, R> Grouping<T, K>.fold(\n    initialValue: R,\n    operation: (accumulator: R, element: T) -> R\n):
Map<K, R> =\n    @Suppress("UNCHECKED_CAST")\n    aggregate { _, acc, e, first -> operation(if (first)
initialValue else acc as R, e) }\n}\n\n/**\n * Groups elements from the [Grouping] source by key and applies
[operation] to the elements of each group sequentially,\n * passing the previously accumulated value and the current
element as arguments,\n * and stores the results in the given [destination] map.\n * An initial value of accumulator
is the same [initialValue] for each group.\n *\n * If the [destination] map already has a value corresponding to the key
of some group,\n * that value is used as an initial value of the accumulator for that group.\n *\n * @param operation
a function that is invoked on each element with the following parameters:\n * - `accumulator`: the current value of
the accumulator of the group;\n * - `element`: the element from the source being accumulated.\n *\n * @return the
[destination] map associating the key of each group with the result of accumulating the group elements.\n *

```

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@sample samples.collections.Grouping.foldByEvenLengthWithConstantInitialValueTo
*/n@SinceKotlin("1.1")npublic inline fun <T, K, R, M : MutableMap<in K, R>> Grouping<T, K>.foldTo(n
destination: M, n  initialValue: R, n  operation: (accumulator: R, element: T) -> R)n: M =n
@Suppress("UNCHECKED_CAST")n  aggregateTo(destination) { _, acc, e, first -> operation(if (first
initialValue else acc as R, e) }n/n/n/**n * Groups elements from the [Grouping] source by key and applies the
reducing [operation] to the elements of each groupn * sequentially starting from the second element of the group,n
* passing the previously accumulated value and the current element as arguments,n * and stores the results in a new
map.n * An initial value of accumulator is the first element of the group.n *n * @param operation a function that
is invoked on each subsequent element of the group with the following parameters:n * - `key`: the key of the group
this element belongs to;n * - `accumulator`: the current value of the accumulator of the group;n * - `element`: the
element from the source being accumulated.n *n * @return a [Map] associating the key of each group with the
result of accumulating the group elements.n * @sample samples.collections.Grouping.reduceByMaxVowels
*/n@SinceKotlin("1.1")npublic inline fun <S, T : S, K> Grouping<T, K>.reduce(n  operation: (key: K,
accumulator: S, element: T) -> S)n: Map<K, S> =n  aggregate { key, acc, e, first ->n
@Suppress("UNCHECKED_CAST")n    if (first) e else operation(key, acc as S, e)n  }n/n/n/**n * Groups
elements from the [Grouping] source by key and applies the reducing [operation] to the elements of each groupn *
sequentially starting from the second element of the group,n * passing the previously accumulated value and the
current element as arguments,n * and stores the results in the given [destination] map.n * An initial value of
accumulator is the first element of the group.n *n * If the [destination] map already has a value corresponding to
the key of some group,n * that value is used as an initial value of the accumulator for that group and the first
element of that group is alson * subjected to the [operation].n *n * @param operation a function that is invoked on
each subsequent element of the group with the following parameters:n * - `accumulator`: the current value of the
accumulator of the group;n * - `element`: the element from the source being folded;n *n * @return the
[destination] map associating the key of each group with the result of accumulating the group elements.n *
@sample samples.collections.Grouping.reduceByMaxVowelsTo
*/n@SinceKotlin("1.1")npublic inline fun <S,
T : S, K, M : MutableMap<in K, S>> Grouping<T, K>.reduceTo(n  destination: M, n  operation: (key: K,
accumulator: S, element: T) -> S)n: M =n  aggregateTo(destination) { key, acc, e, first ->n
@Suppress("UNCHECKED_CAST")n    if (first) e else operation(key, acc as S, e)n  }n/n/n/**n * Groups
elements from the [Grouping] source by key and counts elements in each group to the given [destination] map.n *n
* If the [destination] map already has a value corresponding to the key of some group,n * that value is used as an
initial value of the counter for that group.n *n * @return the [destination] map associating the key of each group
with the count of elements in the group.n *n * @sample samples.collections.Grouping.groupingByEachCount
*/n@SinceKotlin("1.1")npublic fun <T, K, M : MutableMap<in K, Int>> Grouping<T,
K>.eachCountTo(destination: M): M =n  foldTo(destination, 0) { acc, _ -> acc + 1 }n/n/n/**n * Groups
elements from the [Grouping] source by key and sums values provided by the [valueSelector] function for elements
in each groupn * to the given [destination] map.n *n *n * If the [destination] map already has a value
corresponding to the key of some group,n * that value is used as an initial value of the sum for that group.n *n
* @return the [destination] map associating the key of each group with the sum of elements in the group.n
*/n@SinceKotlin("1.1")npublic inline fun <T, K, M : MutableMap<in K, Int>> Grouping<T,
K>.eachSumOfTo(destination: M, valueSelector: (T) -> Int): M =n  foldTo(destination, 0) { acc, e -> acc +
valueSelector(e)}n*/n/n/n/**n// TODO: sum by long and by double overloadsnpublic inline fun <T, K, M :
MutableMap<in K, Long>> Grouping<T, K>.sumEachByLongTo(destination: M, valueSelector: (T) -> Long): M
=n  foldTo(destination, 0L) { acc, e -> acc + valueSelector(e)}npublic inline fun <T, K> Grouping<T,
K>.sumEachByLong(valueSelector: (T) -> Long): Map<K, Long> =n  fold(0L) { acc, e -> acc +
valueSelector(e)}npublic inline fun <T, K, M : MutableMap<in K, Double>> Grouping<T,
K>.sumEachByDoubleTo(destination: M, valueSelector: (T) -> Double): M =n  foldTo(destination, 0.0) { acc, e
-> acc + valueSelector(e)}npublic inline fun <T, K> Grouping<T, K>.sumEachByDouble(valueSelector: (T) ->
Double): Map<K, Double> =n  fold(0.0) { acc, e -> acc + valueSelector(e)}n*/n/n * Copyright 2010-2018

```



rectangular coordinates  $(x, y)$  by computing the arc tangent of the value  $y / x$ ; the returned value is an angle in the range from  $-\pi$  to  $\pi$  radians.

**Special cases:**

- $\text{atan2}(0.0, 0.0)$  is  $0.0$
- $\text{atan2}(0.0, x)$  is  $0.0$  for  $x > 0$  and  $\pi$  for  $x < 0$
- $\text{atan2}(-0.0, x)$  is  $-0.0$  for  $x > 0$  and  $-\pi$  for  $x < 0$
- $\text{atan2}(y, +\text{Inf})$  is  $0.0$  for  $0 < y < +\text{Inf}$  and  $-0.0$  for  $-\text{Inf} < y < 0$
- $\text{atan2}(y, -\text{Inf})$  is  $\pi$  for  $0 < y < +\text{Inf}$  and  $-\pi$  for  $-\text{Inf} < y < 0$
- $\text{atan2}(y, 0.0)$  is  $\pi/2$  for  $y > 0$  and  $-\pi/2$  for  $y < 0$
- $\text{atan2}(+\text{Inf}, x)$  is  $\pi/2$  for finite  $x$
- $\text{atan2}(-\text{Inf}, x)$  is  $-\pi/2$  for finite  $x$
- $\text{atan2}(\text{NaN}, x)$  and  $\text{atan2}(y, \text{NaN})$  is  $\text{NaN}$

```

* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun atan2(y: Double, x: Double): Double =
nativeMath.atan2(y, x) /n /n ** /n * Computes the hyperbolic sine of the value [x]. /n * /n * Special cases: /n * -
`sinh(NaN)` is `NaN` /n * - `sinh(+Inf)` is `+Inf` /n * - `sinh(-Inf)` is `-Inf` /n
* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun sinh(x: Double): Double =
nativeMath.sinh(x) /n /n ** /n * Computes the hyperbolic cosine of the value [x]. /n * /n * Special cases: /n * -
`cosh(NaN)` is `NaN` /n * - `cosh(+Inf|-Inf)` is `+Inf` /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual
inline fun cosh(x: Double): Double = nativeMath.cosh(x) /n /n ** /n * Computes the hyperbolic tangent of the value
[x]. /n * /n * Special cases: /n * - `tanh(NaN)` is `NaN` /n * - `tanh(+Inf)` is `1.0` /n * - `tanh(-Inf)` is `-1.0` /n
* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun tanh(x: Double): Double =
nativeMath.tanh(x) /n /n ** /n * Computes the inverse hyperbolic sine of the value [x]. /n * /n * The returned value is
`y` such that `sinh(y) == x`. /n * /n * Special cases: /n * - `asinh(NaN)` is `NaN` /n * - `asinh(+Inf)` is `+Inf` /n * -
`asinh(-Inf)` is `-Inf` /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun asinh(x: Double): Double
= nativeMath.asinh(x) /n /n ** /n * Computes the inverse hyperbolic cosine of the value [x]. /n * /n * The returned
value is positive `y` such that `cosh(y) == x`. /n * /n * Special cases: /n * - `acosh(NaN)` is `NaN` /n * - `acosh(x)`
is `NaN` when `x < 1` /n * - `acosh(+Inf)` is `+Inf` /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline
fun acosh(x: Double): Double = nativeMath.acosh(x) /n /n ** /n * Computes the inverse hyperbolic tangent of the
value [x]. /n * /n * The returned value is `y` such that `tanh(y) == x`. /n * /n * Special cases: /n * - `tanh(NaN)` is
`NaN` /n * - `tanh(x)` is `NaN` when `x > 1` or `x < -1` /n * - `tanh(1.0)` is `+Inf` /n * - `tanh(-1.0)` is `-Inf` /n
* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun atanh(x: Double): Double =
nativeMath.atanh(x) /n /n ** /n * Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow. /n * /n *
Special cases: /n * - returns `+Inf` if any of arguments is infinite /n * - returns `NaN` if any of arguments is `NaN`
and the other is not infinite /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun hypot(x: Double, y:
Double): Double = nativeMath.hypot(x, y) /n /n ** /n * Computes the positive square root of the value [x]. /n * /n *
Special cases: /n * - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN` /n
* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun sqrt(x: Double): Double =
nativeMath.sqrt(x) /n /n ** /n * Computes Euler's number `e` raised to the power of the value [x]. /n * /n * Special
cases: /n * - `exp(NaN)` is `NaN` /n * - `exp(+Inf)` is `+Inf` /n * - `exp(-Inf)` is `0.0` /n
* /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun exp(x: Double): Double =
nativeMath.exp(x) /n /n ** /n * Computes `exp(x) - 1`. /n * /n * This function can be implemented to produce more
precise result for [x] near zero. /n * /n * Special cases: /n * - `expm1(NaN)` is `NaN` /n * - `expm1(+Inf)` is `+Inf` /n
* - `expm1(-Inf)` is `-1.0` /n * /n * @see [exp] function. /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual
inline fun expm1(x: Double): Double = nativeMath.expm1(x) /n /n ** /n * Computes the logarithm of the value [x] to
the given [base]. /n * /n * Special cases: /n * - `log(x, b)` is `NaN` if either `x` or `b` are `NaN` /n * - `log(x, b)` is
`NaN` when `x < 0` or `b <= 0` or `b == 1.0` /n * - `log(+Inf, +Inf)` is `NaN` /n * - `log(+Inf, b)` is `+Inf` for `b >
1` and `-Inf` for `b < 1` /n * - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b > 1` /n * See also logarithm
functions for common fixed bases: [ln], [log10] and [log2]. /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual fun log(x:
Double, base: Double): Double { /n if (base <= 0.0 || base == 1.0) return Double.NaN /n return nativeMath.log(x)
/ nativeMath.log(base) /n } /n /n ** /n * Computes the natural logarithm (base `E`) of the value [x]. /n * /n * Special
cases: /n * - `ln(NaN)` is `NaN` /n * - `ln(x)` is `NaN` when `x < 0.0` /n * - `ln(+Inf)` is `+Inf` /n * - `ln(0.0)` is
`-Inf` /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun ln(x: Double): Double =
nativeMath.log(x) /n /n ** /n * Computes the common logarithm (base 10) of the value [x]. /n * /n * @see [ln] function
for special cases. /n * /n @SinceKotlin("1.2") /n @InlineOnly /n public actual inline fun log10(x: Double): Double =

```

`nativeMath.log10(x)` Computes the binary logarithm (base 2) of the value [x]. @see [ln] function for special cases.
   
`nativeMath.log2(x)` Computes  $\ln(x + 1)$ . This function can be implemented to produce more precise result for [x] near zero. Special cases:  $-\ln1p(\text{NaN})$  is  $\text{NaN}$   $-\ln1p(x)$  is  $\text{NaN}$  where  $x < -1.0$   $-\ln1p(-1.0)$  is  $-\text{Inf}$   $-\ln1p(+\text{Inf})$  is  $+\text{Inf}$  @see [ln] function @see [expm1] function
   
`nativeMath.log1p(x)` Rounds the given value [x] to an integer towards positive infinity. @return the smallest double value that is greater than or equal to the given value [x] and is a mathematical integer. Special cases:  $-\text{ceil}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.
   
`nativeMath.ceil(x)` Rounds the given value [x] to an integer towards negative infinity. @return the largest double value that is smaller than or equal to the given value [x] and is a mathematical integer. Special cases:  $-\text{floor}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.
   
`nativeMath.floor(x)` Rounds the given value [x] to an integer towards zero. @return the value [x] having its fractional part truncated. Special cases:  $-\text{truncate}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.
   
`nativeMath.truncate(x)` Rounds the given value [x] towards the closest integer with ties rounded towards even integer. Special cases:  $-\text{round}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.
   
`nativeMath.round(x)` Returns the absolute value of the given value [x]. Special cases:  $-\text{abs}(\text{NaN})$  is  $\text{NaN}$  @see absoluteValue extension property for [Double]
   
`nativeMath.abs(x)` Returns the sign of the given value [x]:  $-1.0$  if the value is negative,  $0$  if the value is zero,  $1.0$  if the value is positive. Special case:  $-\text{sign}(\text{NaN})$  is  $\text{NaN}$ 
  
`nativeMath.sign(x)` Returns the smaller of two values. If either value is  $\text{NaN}$ , then the result is  $\text{NaN}$ .
   
`nativeMath.min(a, b)` Returns the greater of two values. If either value is  $\text{NaN}$ , then the result is  $\text{NaN}$ .
   
`nativeMath.max(a, b)` Raises this value to the power [x]. Special cases:  $-\text{b.pow}(0.0)$  is  $1.0$   $-\text{b.pow}(1.0) == b$   $-\text{b.pow}(\text{NaN})$  is  $\text{NaN}$   $-\text{NaN.pow}(x)$  is  $\text{NaN}$  for  $x != 0.0$   $-\text{b.pow}(\text{Inf})$  is  $\text{NaN}$  for  $|\text{abs}(b)| == 1.0$   $-\text{b.pow}(x)$  is  $\text{NaN}$  for  $b < 0$  and  $x$  is finite and not an integer
   
`Double.pow(x)` Returns this value to the integer power [n]. See the other overload of [pow] for details.
   
`Double.pow(n)` Returns the absolute value of this value. Special cases:  $-\text{NaN.absoluteValue}$  is  $\text{NaN}$  @see abs function
   
`Double.absoluteValue` Returns the sign of this value:  $-1.0$  if the value is negative,  $0$  if the value is zero,  $1.0$  if the value is positive. Special case:  $-\text{NaN.sign}$  is  $\text{NaN}$ 
  
`Double.sign` Returns this value with the sign bit same as of the [sign] value.
   
`Double.withSign(sign)` Returns the ulp (unit in the last place) of this value. An ulp is a positive distance between this value and the next nearest [Double] value larger in magnitude. Special Cases:  $-\text{NaN.ulp}$  is  $\text{NaN}$   $-x.ulp$  is  $+\text{Inf}$  when  $x$  is  $+\text{Inf}$  or  $-\text{Inf}$   $-\text{0.0.ulp}$  is  $\text{Double.MIN\_VALUE}$ 
  
`Double.ulp` Returns the ulp (unit in the last place) of this value.

```

< 0 -> (-this).ulp\n this.isNaN() || this == Double.POSITIVE_INFINITY -> this\n this ==
Double.MAX_VALUE -> this - this.nextDown()\n else -> this.nextUp() - this\n}\n\n/**\n * Returns the [Double]
value nearest to this value in direction of positive infinity.\n */\n@SinceKotlin("1.2")\npublic actual fun
Double.nextUp(): Double = when {\n this.isNaN() || this == Double.POSITIVE_INFINITY -> this\n this == 0.0
-> Double.MIN_VALUE\n else -> Double.fromBits(this.toRawBits() + if (this > 0) 1 else -1)\n}\n\n/**\n *
Returns the [Double] value nearest to this value in direction of negative infinity.\n */\n@SinceKotlin("1.2")\npublic actual fun Double.nextDown(): Double = when {\n this.isNaN() || this ==
Double.NEGATIVE_INFINITY -> this\n this == 0.0 -> -Double.MIN_VALUE\n else ->
Double.fromBits(this.toRawBits() + if (this > 0) -1 else 1)\n}\n\n/**\n * Returns the [Double] value nearest to this
value in direction from this value towards the value [to].\n */\n * Special cases:\n * - `x.nextTowards(y)` is `NaN` if
either `x` or `y` are `NaN`\n * - `x.nextTowards(x) == x`\n */\n@SinceKotlin("1.2")\npublic actual fun
Double.nextTowards(to: Double): Double = when {\n this.isNaN() || to.isNaN() -> Double.NaN\n to == this ->
to\n to > this -> this.nextUp()\n else /* to < this */ -> this.nextDown()\n}\n\n/**\n * Rounds this [Double]
value to the nearest integer and converts the result to [Int].\n */\n * Ties are rounded towards positive infinity.\n */\n *
Special cases:\n * - `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n * - `x.roundToInt()
== Int.MIN_VALUE` when `x < Int.MIN_VALUE`\n */\n * @throws IllegalArgumentException when this value is
`NaN`\n */\n@SinceKotlin("1.2")\npublic actual fun Double.roundToInt(): Int = when {\n isNaN() -> throw
IllegalArgumentException("Cannot round NaN value.")\n this > Int.MAX_VALUE -> Int.MAX_VALUE\n this < Int.MIN_VALUE -> Int.MIN_VALUE\n else -> nativeMath.round(this).toInt()\n}\n\n/**\n * Rounds this
[Double] value to the nearest integer and converts the result to [Long].\n */\n * Ties are rounded towards positive
infinity.\n */\n * Special cases:\n * - `x.roundToLong() == Long.MAX_VALUE` when `x >
Long.MAX_VALUE`\n * - `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`\n */\n *
@throws IllegalArgumentException when this value is `NaN`\n */\n@SinceKotlin("1.2")\npublic actual fun
Double.roundToLong(): Long = when {\n isNaN() -> throw IllegalArgumentException("Cannot round NaN
value.")\n this > Long.MAX_VALUE -> Long.MAX_VALUE\n this < Long.MIN_VALUE ->
Long.MIN_VALUE\n else -> nativeMath.round(this).toLong()\n}\n\n// endregion\n\n// region
===== Float Math =====\n\n/**\n * Computes the
sine of the angle [x] given in radians.\n */\n * Special cases:\n * - `sin(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sin(x: Float): Float =
nativeMath.sin(x.toDouble()).toFloat()\n\n/**\n * Computes the cosine of the angle [x] given in radians.\n */\n *
Special cases:\n * - `cos(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun
cos(x: Float): Float = nativeMath.cos(x.toDouble()).toFloat()\n\n/**\n * Computes the tangent of the angle [x] given in
radians.\n */\n * Special cases:\n * - `tan(NaN|+Inf|-Inf)` is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun tan(x: Float): Float =
nativeMath.tan(x.toDouble()).toFloat()\n\n/**\n * Computes the arc sine of the value [x];\n */\n * the returned value is
an angle in the range from `-PI/2` to `PI/2` radians.\n */\n * Special cases:\n * - `asin(x)` is `NaN`, when `abs(x) >
1` or x is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun asin(x: Float): Float =
nativeMath.asin(x.toDouble()).toFloat()\n\n/**\n * Computes the arc cosine of the value [x];\n */\n * the returned value
is an angle in the range from `0.0` to `PI` radians.\n */\n * Special cases:\n * - `acos(x)` is `NaN`, when `abs(x) >
1` or x is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun acos(x: Float): Float =
nativeMath.acos(x.toDouble()).toFloat()\n\n/**\n * Computes the arc tangent of the value [x];\n */\n * the returned value
is an angle in the range from `-PI/2` to `PI/2` radians.\n */\n * Special cases:\n * - `atan(NaN)` is `NaN`\n */\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atan(x: Float): Float =
nativeMath.atan(x.toDouble()).toFloat()\n\n/**\n * Returns the angle `theta` of the polar coordinates `(r, theta)` that
correspond\n */\n * to the rectangular coordinates `(x, y)` by computing the arc tangent of the value [y] / [x];\n */\n * the
returned value is an angle in the range from `-PI` to `PI` radians.\n */\n * Special cases:\n * - `atan2(0.0, 0.0)` is
`0.0`\n * - `atan2(0.0, x)` is `0.0` for `x > 0` and `PI` for `x < 0`\n * - `atan2(-0.0, x)` is `-0.0` for `x > 0` and `-PI`
for `x < 0`\n * - `atan2(y, +Inf)` is `0.0` for `0 < y < +Inf` and `-0.0` for `-Inf < y < 0`\n * - `atan2(y, -Inf)` is `PI`

```

for  $0 < y < +\infty$  and  $-\pi$  for  $-\infty < y < 0$  \*  $-\operatorname{atan2}(y, 0.0)$  is  $\pi/2$  for  $y > 0$  and  $-\pi/2$  for  $y < 0$  \*  $-\operatorname{atan2}(+\infty, x)$  is  $\pi/2$  for finite  $x$  \*  $-\operatorname{atan2}(-\infty, x)$  is  $-\pi/2$  for finite  $x$  \*  $-\operatorname{atan2}(\text{NaN}, x)$  and  $\operatorname{atan2}(y, \text{NaN})$  is  $\text{NaN}$  \* `@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atan2(y: Float, x: Float): Float = nativeMath.atan2(y.toDouble(), x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic sine of the value [x].\n * Special cases:\n * -  $\sinh(\text{NaN})$  is  $\text{NaN}$ \n * -  $\sinh(+\infty)$  is  $+\infty$ \n * -  $\sinh(-\infty)$  is  $-\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sinh(x: Float): Float = nativeMath.sinh(x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic cosine of the value [x].\n * Special cases:\n * -  $\cosh(\text{NaN})$  is  $\text{NaN}$ \n * -  $\cosh(+\infty)$  is  $+\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun cosh(x: Float): Float = nativeMath.cosh(x.toDouble()).toFloat()\n\n/**\n * Computes the hyperbolic tangent of the value [x].\n * Special cases:\n * -  $\tanh(\text{NaN})$  is  $\text{NaN}$ \n * -  $\tanh(+\infty)$  is  $1.0$ \n * -  $\tanh(-\infty)$  is  $-1.0$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun tanh(x: Float): Float = nativeMath.tanh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic sine of the value [x].\n * The returned value is  $y$  such that  $\sinh(y) == x$ .\n * Special cases:\n * -  $\operatorname{asinh}(\text{NaN})$  is  $\text{NaN}$ \n * -  $\operatorname{asinh}(+\infty)$  is  $+\infty$ \n * -  $\operatorname{asinh}(-\infty)$  is  $-\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun asinh(x: Float): Float = nativeMath.asinh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic cosine of the value [x].\n * The returned value is positive  $y$  such that  $\cosh(y) == x$ .\n * Special cases:\n * -  $\operatorname{acosh}(\text{NaN})$  is  $\text{NaN}$ \n * -  $\operatorname{acosh}(x)$  is  $\text{NaN}$  when  $x < 1$ \n * -  $\operatorname{acosh}(+\infty)$  is  $+\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun acosh(x: Float): Float = nativeMath.acosh(x.toDouble()).toFloat()\n\n/**\n * Computes the inverse hyperbolic tangent of the value [x].\n * The returned value is  $y$  such that  $\tanh(y) == x$ .\n * Special cases:\n * -  $\operatorname{atanh}(\text{NaN})$  is  $\text{NaN}$ \n * -  $\operatorname{atanh}(x)$  is  $\text{NaN}$  when  $x > 1$  or  $x < -1$ \n * -  $\operatorname{atanh}(1.0)$  is  $+\infty$ \n * -  $\operatorname{atanh}(-1.0)$  is  $-\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun atanh(x: Float): Float = nativeMath.atanh(x.toDouble()).toFloat()\n\n/**\n * Computes  $\sqrt{x^2 + y^2}$  without intermediate overflow or underflow.\n * Special cases:\n * - returns  $+\infty$  if any of arguments is infinite\n * - returns  $\text{NaN}$  if any of arguments is  $\text{NaN}$  and the other is not infinite\n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun hypot(x: Float, y: Float): Float = nativeMath.hypot(x.toDouble(), y.toDouble()).toFloat()\n\n/**\n * Computes the positive square root of the value [x].\n * Special cases:\n * -  $\sqrt{x}$  is  $\text{NaN}$  when  $x < 0$  or  $x$  is  $\text{NaN}$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sqrt(x: Float): Float = nativeMath.sqrt(x.toDouble()).toFloat()\n\n/**\n * Computes Euler's number  $e$  raised to the power of the value [x].\n * Special cases:\n * -  $\exp(\text{NaN})$  is  $\text{NaN}$ \n * -  $\exp(+\infty)$  is  $+\infty$ \n * -  $\exp(-\infty)$  is  $0.0$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun exp(x: Float): Float = nativeMath.exp(x.toDouble()).toFloat()\n\n/**\n * Computes  $\exp(x) - 1$ .\n * This function can be implemented to produce more precise result for [x] near zero.\n * Special cases:\n * -  $\operatorname{expm1}(\text{NaN})$  is  $\text{NaN}$ \n * -  $\operatorname{expm1}(+\infty)$  is  $+\infty$ \n * -  $\operatorname{expm1}(-\infty)$  is  $-1.0$ \n * @see [exp] function.\n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun expm1(x: Float): Float = nativeMath.expm1(x.toDouble()).toFloat()\n\n/**\n * Computes the logarithm of the value [x] to the given [base].\n * Special cases:\n * -  $\log(x, b)$  is  $\text{NaN}$  if either  $x$  or  $b$  are  $\text{NaN}$ \n * -  $\log(x, b)$  is  $\text{NaN}$  when  $x < 0$  or  $b \leq 0$  or  $b == 1.0$ \n * -  $\log(+\infty, +\infty)$  is  $\text{NaN}$ \n * -  $\log(+\infty, b)$  is  $+\infty$  for  $b > 1$  and  $-\infty$  for  $b < 1$ \n * -  $\log(0.0, b)$  is  $-\infty$  for  $b > 1$  and  $+\infty$  for  $b > 1$ \n * See also logarithm functions for common fixed bases: [ln], [log10] and [log2].\n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun log(x: Float, base: Float): Float = log(x.toDouble(), base.toDouble()).toFloat()\n\n/**\n * Computes the natural logarithm (base  $E$ ) of the value [x].\n * Special cases:\n * -  $\ln(\text{NaN})$  is  $\text{NaN}$ \n * -  $\ln(x)$  is  $\text{NaN}$  when  $x < 0.0$ \n * -  $\ln(+\infty)$  is  $+\infty$ \n * -  $\ln(0.0)$  is  $-\infty$ \n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun ln(x: Float): Float = nativeMath.log(x.toDouble()).toFloat()\n\n/**\n * Computes the common logarithm (base 10) of the value [x].\n * @see [ln] function for special cases.\n * @SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun log10(x: Float): Float = nativeMath.log10(x.toDouble()).toFloat()\n\n/**\n * Computes the binary logarithm (base 2) of the value [x].\n * @see [ln] function for special cases.`

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*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun log2(x: Float): Float =
nativeMath.log2(x.toDouble()).toFloat()\n\n/**\n * Computes  $\ln(a + 1)$ .\n * This function can be implemented
to produce more precise result for [x] near zero.\n * Special cases:\n * -  $\ln1p(\text{NaN})$  is  $\text{NaN}$ \n * -  $\ln1p(x)$ 
is  $\text{NaN}$  where  $x < -1.0$ \n * -  $\ln1p(-1.0)$  is  $-\text{Inf}$ \n * -  $\ln1p(+\text{Inf})$  is  $+\text{Inf}$ \n * @see [ln] function\n *
@see [expm1] function\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun ln1p(x: Float): Float =
nativeMath.log1p(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards positive
infinity.\n * @return the smallest Float value that is greater than or equal to the given value [x] and is a
mathematical integer.\n * Special cases:\n * -  $\text{ceil}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a
mathematical integer.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun ceil(x: Float): Float =
nativeMath.ceil(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards negative
infinity.\n * @return the largest Float value that is smaller than or equal to the given value [x] and is a
mathematical integer.\n * Special cases:\n * -  $\text{floor}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a
mathematical integer.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun floor(x: Float): Float =
nativeMath.floor(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x] to an integer towards zero.\n *
@return the value [x] having its fractional part truncated.\n * Special cases:\n * -  $\text{truncate}(x)$  is  $x$  where  $x$ 
is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic
actual inline fun truncate(x: Float): Float = truncate(x.toDouble()).toFloat()\n\n/**\n * Rounds the given value [x]
towards the closest integer with ties rounded towards even integer.\n * Special cases:\n * -  $\text{round}(x)$  is  $x$ 
where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun round(x: Float): Float =
round(x.toDouble()).toFloat()\n\n/**\n * Returns the absolute value of the given value [x].\n * Special cases:\n
* -  $\text{abs}(\text{NaN})$  is  $\text{NaN}$ \n * @see absoluteValue extension property for [Float]\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun abs(x: Float): Float =
nativeMath.abs(x.toDouble()).toFloat()\n\n/**\n * Returns the sign of the given value [x]:\n * -  $-1.0$  if the value is
negative,\n * - zero if the value is zero,\n * -  $1.0$  if the value is positive\n * Special case:\n * -  $\text{sign}(\text{NaN})$ 
is  $\text{NaN}$ \n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun sign(x: Float): Float =
nativeMath.sign(x.toDouble()).toFloat()\n\n/**\n * Returns the smaller of two values.\n * If either value is
 $\text{NaN}$ , then the result is  $\text{NaN}$ .\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun min(a: Float, b:
Float): Float = nativeMath.min(a, b)\n\n/**\n * Returns the greater of two values.\n * If either value is  $\text{NaN}$ ,
then the result is  $\text{NaN}$ .\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun max(a: Float, b: Float):
Float = nativeMath.max(a, b)\n\n// extensions\n\n/**\n * Raises this value to the power [x].\n * Special
cases:\n * -  $b.\text{pow}(0.0)$  is  $1.0$ \n * -  $b.\text{pow}(1.0) == b$ \n * -  $b.\text{pow}(\text{NaN})$  is  $\text{NaN}$ \n * -  $\text{NaN}.\text{pow}(x)$  is
 $\text{NaN}$  for  $x != 0.0$ \n * -  $b.\text{pow}(\text{Inf})$  is  $\text{NaN}$  for  $\text{abs}(b) == 1.0$ \n * -  $b.\text{pow}(x)$  is  $\text{NaN}$  for  $b < 0$  and  $x$  is
finite and not an integer\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Float.pow(x: Float):
Float = nativeMath.pow(this.toDouble(), x.toDouble()).toFloat()\n\n/**\n * Raises this value to the integer power
[n].\n * See the other overload of [pow] for details.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual
inline fun Float.pow(n: Int): Float = nativeMath.pow(this.toDouble(), n.toDouble()).toFloat()\n\n/**\n * Returns the
absolute value of this value.\n * Special cases:\n * -  $\text{NaN}.\text{absoluteValue}$  is  $\text{NaN}$ \n * @see abs function\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Float.absoluteValue: Float get() =
nativeMath.abs(this.toDouble()).toFloat()\n\n/**\n * Returns the sign of this value:\n * -  $-1.0$  if the value is
negative,\n * - zero if the value is zero,\n * -  $1.0$  if the value is positive\n * Special case:\n * -  $\text{NaN}.\text{sign}$  is
 $\text{NaN}$ \n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Float.sign: Float get() =
nativeMath.sign(this.toDouble()).toFloat()\n\n/**\n * Returns this value with the sign bit same as of the [sign]
value.\n * If [sign] is  $\text{NaN}$  the sign of the result is undefined.\n
*\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Float.withSign(sign: Float): Float =
this.toDouble().withSign(sign.toDouble()).toFloat()\n\n/**\n * Returns this value with the sign bit same as of the
[sign] value.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Float.withSign(sign: Int): Float =
this.toDouble().withSign(sign.toDouble()).toFloat()\n\n/**\n * Rounds this [Float] value to the nearest integer and

```

```

converts the result to [Int].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * -
`x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`\n * - `x.roundToInt() == Int.MIN_VALUE`
when `x < Int.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n
*/\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Float.roundToInt(): Int =
toDouble().roundToInt()\n\n/**\n * Rounds this [Float] value to the nearest integer and converts the result to
[Long].\n * Ties are rounded towards positive infinity.\n *\n * Special cases:\n * - `x.roundToLong() ==
Long.MAX_VALUE` when `x > Long.MAX_VALUE`\n * - `x.roundToLong() == Long.MIN_VALUE` when `x
< Long.MIN_VALUE`\n *\n * @throws IllegalArgumentException when this value is `NaN`\n
*/\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun Float.roundToLong(): Long =
toDouble().roundToLong()\n\n// endregion\n\n// region ===== Integer Math
=====
\n\n\n/**\n * Returns the absolute value of the given value
[n].\n *\n * Special cases:\n * - `abs(Int.MIN_VALUE)` is `Int.MIN_VALUE` due to an overflow\n *\n * @see
absoluteValue extension property for [Int]\n *\n// TODO: remove manual 'or' when KT-19290 is
fixed\n@SinceKotlin("1.2")\npublic actual fun abs(n: Int): Int = if (n < 0) (-n or 0) else n\n\n/**\n * Returns the
smaller of two values.\n *\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun min(a: Int, b: Int): Int =
nativeMath.min(a, b)\n\n/**\n * Returns the greater of two values.\n
*/\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline fun max(a: Int, b: Int): Int = nativeMath.max(a,
b)\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * -
`Int.MIN_VALUE.absoluteValue` is `Int.MIN_VALUE` due to an overflow\n *\n * @see abs function\n
*/\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Int.absoluteValue: Int get() = abs(this)\n\n/**\n *
Returns the sign of this value:\n * - `-1` if the value is negative,\n * - `0` if the value is zero,\n * - `1` if the value
is positive\n *\n@SinceKotlin("1.2")\npublic actual val Int.sign: Int get() = when {\n    this < 0 -> -1\n    this > 0 -
> 1\n    else -> 0\n}\n\n\n/**\n * Returns the absolute value of the given value [n].\n *\n * Special cases:\n * -
`abs(Long.MIN_VALUE)` is `Long.MIN_VALUE` due to an overflow\n *\n * @see absoluteValue extension
property for [Long]\n *\n@SinceKotlin("1.2")\npublic actual fun abs(n: Long): Long = if (n < 0) -n else
n\n\n/**\n * Returns the smaller of two values.\n
*/\n@SinceKotlin("1.2")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun min(a: Long, b:
Long): Long = if (a <= b) a else b\n\n/**\n * Returns the greater of two values.\n
*/\n@SinceKotlin("1.2")\n@Suppress("NOTHING_TO_INLINE")\npublic actual inline fun max(a: Long, b:
Long): Long = if (a >= b) a else b\n\n/**\n * Returns the absolute value of this value.\n *\n * Special cases:\n * -
`Long.MIN_VALUE.absoluteValue` is `Long.MIN_VALUE` due to an overflow\n *\n * @see abs function\n
*/\n@SinceKotlin("1.2")\n@InlineOnly\npublic actual inline val Long.absoluteValue: Long get() =
abs(this)\n\n/**\n * Returns the sign of this value:\n * - `-1` if the value is negative,\n * - `0` if the value is zero,\n
* - `1` if the value is positive\n *\n@SinceKotlin("1.2")\npublic actual val Long.sign: Int get() = when {\n    this
< 0 -> -1\n    this > 0 -> 1\n    else -> 0\n}\n\n\n// endregion\n", /*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Returns `true` if the specified
number is a\n * Not-a-Number (NaN) value, `false` otherwise.\n *\n@public actual fun Double.isNaN(): Boolean =
this != this\n\n/**\n * Returns `true` if the specified number is a\n * Not-a-Number (NaN) value, `false` otherwise.\n
*/\n@public actual fun Float.isNaN(): Boolean = this != this\n\n/**\n * Returns `true` if this value is infinitely large in
magnitude.\n *\n@public actual fun Double.isInfinite(): Boolean = this == Double.POSITIVE_INFINITY || this ==
Double.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if this value is infinitely large in magnitude.\n *\n@public
actual fun Float.isInfinite(): Boolean = this == Float.POSITIVE_INFINITY || this ==
Float.NEGATIVE_INFINITY\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns
`false` otherwise (for `NaN` and infinity arguments).\n *\n@public actual fun Double.isFinite(): Boolean =
!isInfinite() && !isNaN()\n\n/**\n * Returns `true` if the argument is a finite floating-point value; returns `false`
otherwise (for `NaN` and infinity arguments).\n *\n@public actual fun Float.isFinite(): Boolean = !isInfinite() &&
!isNaN()\n\n/**\n * Counts the number of set bits in the binary representation of this [Int] number.\n

```

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*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.countOneBits(): Int {\n // Hacker's Delight 5-1 algorithm\n var v = this\n v = (v and 0x55555555) +
(v.ushr(1) and 0x55555555)\n v = (v and 0x33333333) + (v.ushr(2) and 0x33333333)\n v = (v and 0x0F0F0F0F)
+ (v.ushr(4) and 0x0F0F0F0F)\n v = (v and 0x00FF00FF) + (v.ushr(8) and 0x00FF00FF)\n v = (v and
0x0000FFFF) + (v.ushr(16))\n return v}\n\n/**\n * Counts the number of consecutive most significant bits that
are zero in the binary representation of this [Int] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Int.countLeadingZeroBits(): Int = JsMath.clz32(this)\n\n/**\n * Counts the number of
consecutive least significant bits that are zero in the binary representation of this [Int] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.countTrailingZeroBits(): Int =\n // Hacker's Delight 5-4 algorithm for expressing countTrailingZeroBits with
countLeadingZeroBits\n Int.SIZE_BITS - (this or -this).inv().countLeadingZeroBits()\n\n/**\n * Returns a
number having a single bit set in the position of the most significant set bit of this [Int] number,\n * or zero, if this
number is zero.\n *\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.takeHighestOneBit(): Int =\n if (this == 0) 0 else 1.shl(Int.SIZE_BITS - 1 - countLeadingZeroBits())\n\n/**\n *
Returns a number having a single bit set in the position of the least significant set bit of this [Int] number,\n * or
zero, if this number is zero.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.takeLowestOneBit(): Int =\n // Hacker's Delight 2-1 algorithm for isolating rightmost 1-bit\n this and -
this\n\n/**\n * Rotates the binary representation of this [Int] number left by the specified [bitCount] number of
bits.\n * The most significant bits pushed out from the left side reenter the number as the least significant bits on the
right side.\n *\n * Rotating the number left by a negative bit count is the same as rotating it right by the negated bit
count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n *\n * Rotating by a multiple of [Int.SIZE_BITS] (32)
returns the same number, or more generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 32)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.rotateLeft(bitCount: Int): Int =\n shl(bitCount) or ushr(Int.SIZE_BITS - bitCount)\n\n\n/**\n * Rotates the
binary representation of this [Int] number right by the specified [bitCount] number of bits.\n * The least significant
bits pushed out from the right side reenter the number as the most significant bits on the left side.\n *\n * Rotating
the number right by a negative bit count is the same as rotating it left by the negated bit count:\n *
`number.rotateRight(-n) == number.rotateLeft(n)`\n *\n * Rotating by a multiple of [Int.SIZE_BITS] (32) returns
the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 32)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Int.rotateRight(bitCount: Int): Int =\n shl(Int.SIZE_BITS - bitCount) or ushr(bitCount)\n\n\n/**\n * Counts the
number of set bits in the binary representation of this [Long] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.countOneBits(): Int =\n high.countOneBits() + low.countOneBits()\n\n\n/**\n * Counts the number of
consecutive most significant bits that are zero in the binary representation of this [Long] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.countLeadingZeroBits(): Int =\n when (val high = this.high) {\n 0 -> Int.SIZE_BITS +
low.countLeadingZeroBits()\n else -> high.countLeadingZeroBits()\n }\n\n\n/**\n * Counts the number of
consecutive least significant bits that are zero in the binary representation of this [Long] number.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.countTrailingZeroBits(): Int =\n when (val low = this.low) {\n 0 -> Int.SIZE_BITS +
high.countTrailingZeroBits()\n else -> low.countTrailingZeroBits()\n }\n\n\n/**\n * Returns a number having a
single bit set in the position of the most significant set bit of this [Long] number,\n * or zero, if this number is
zero.\n *\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.takeHighestOneBit(): Long =\n when (val high = this.high) {\n 0 -> Long(low.takeHighestOneBit(),
0)\n else -> Long(0, high.takeHighestOneBit())\n }\n\n\n/**\n * Returns a number having a single bit set in the

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position of the least significant set bit of this [Long] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.takeLowestOneBit(): Long =\n    when (val low = this.low) {\n        0 -> Long(0, high.takeLowestOneBit())\n        else -> Long(low.takeLowestOneBit(), 0)\n    }\n\n/**\n * Rotates the binary representation of this [Long]
number left by the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side
reenter the number as the least significant bits on the right side.\n *\n * Rotating the number left by a negative bit
count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) ==
number.rotateRight(n)`\n *\n * Rotating by a multiple of [Long.SIZE_BITS] (64) returns the same number, or more
generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 64)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual fun
Long.rotateLeft(bitCount: Int): Long {\n    if ((bitCount and 31) != 0) {\n        val low = this.low\n        val high =
this.high\n        val newLow = low.shl(bitCount) or high.ushr(-bitCount)\n        val newHigh = high.shl(bitCount) or
low.ushr(-bitCount)\n        return if ((bitCount and 32) == 0) Long(newLow, newHigh) else Long(newHigh,
newLow)\n    } else {\n        return if ((bitCount and 32) == 0) this else Long(high, low)\n    }\n}\n\n/**\n *
Rotates the binary representation of this [Long] number right by the specified [bitCount] number of bits.\n * The
least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n
*\n * Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n *
`number.rotateRight(-n) == number.rotateLeft(n)`\n *\n * Rotating by a multiple of [Long.SIZE_BITS] (64) returns
the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 64)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npubli
c actual inline fun Long.rotateRight(bitCount: Int): Long = rotateLeft(-bitCount)\n", "/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n *\npackage kotlin.js\n\nimport
kotlin.internal.LowPriorityInOverloadResolution\n\n/**\n * Exposes the JavaScript [Promise
object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/Promise) to Kotlin.\n
*\n@Suppress("NOT_DOCUMENTED")\npublic open external class Promise<out T>(executor: (resolve: (T) ->
Unit, reject: (Throwable) -> Unit) -> Unit) {\n    @LowPriorityInOverloadResolution\n    public open fun <S>
then(onFulfilled: ((T) -> S)?): Promise<S>\n\n    @LowPriorityInOverloadResolution\n    public open fun <S>
then(onFulfilled: ((T) -> S)?, onRejected: ((Throwable) -> S)?): Promise<S>\n\n    public open fun <S>
catch(onRejected: (Throwable) -> S): Promise<S>\n\n    companion object {\n        public fun <S> all(promise:
Array<out Promise<S>>): Promise<Array<out S>>\n\n        public fun <S> race(promise: Array<out
Promise<S>>): Promise<S>\n\n        public fun reject(e: Throwable): Promise<Nothing>\n\n        public fun <S>
resolve(e: S): Promise<S>\n\n        public fun <S> resolve(e: Promise<S>): Promise<S>\n    }\n}\n\n// It's workaround
for KT-19672 since we can fix it properly until KT-11265 isn't fixed.\n\ninline fun <T, S>
Promise<Promise<T>>.then(\n    noinline onFulfilled: ((T) -> S)?\n): Promise<S> {\n    return
this.unsafeCast<Promise<T>>().then(onFulfilled)\n}\n\ninline fun <T, S> Promise<Promise<T>>.then(\n    noinline
onFulfilled: ((T) -> S)?,\n    noinline onRejected: ((Throwable) -> S)?\n): Promise<S> {\n    return
this.unsafeCast<Promise<T>>().then(onFulfilled, onRejected)\n}\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n *\n *\npackage kotlin.random\n\nimport
kotlin.math.pow\n\ninternal actual fun defaultPlatformRandom(): Random =\n    Random(js(Math.random() *
Math.pow(2, 32)) | 0L).unsafeCast<Int>())\n\nprivate val INV_2_26: Double = 2.0.pow(-26)\nprivate val
INV_2_53: Double = 2.0.pow(-53)\n\ninternal actual fun doubleFromParts(hi26: Int, low27: Int): Double =\n    hi26 *
INV_2_26 + low27 * INV_2_53", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n *\npackage kotlin.reflect\n\nimport findAssociatedObject\n\n/**\n * The
experimental marker for associated objects API.\n *\n * Any usage of a declaration annotated with
`@ExperimentalAssociatedObjects` must be accepted either by\n * annotating that usage with the [OptIn]

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annotation, e.g. `@OptIn(ExperimentalAssociatedObjects::class)`,\n * or by using the compiler argument `-Xopt-
in=kotlin.reflect.ExperimentalAssociatedObjects`.\n *\n@RequiresOptIn(level =
RequiresOptIn.Level.ERROR)\n@Retention(value = AnnotationRetention.BINARY)\npublic annotation class
ExperimentalAssociatedObjects\n\n/**\n * Makes the annotated annotation class an associated object key.\n *\n *
An associated object key annotation should have single [KClass] parameter.\n * When applied to a class with
reference to an object declaration as an argument, it binds\n * the object to the class, making this binding
discoverable at runtime using [findAssociatedObject].\n
*\n@ExperimentalAssociatedObjects\n@Retention(AnnotationRetention.BINARY)\n@Target(AnnotationTarget.A
NNOTATION_CLASS)\npublic annotation class AssociatedObjectKey\n\n/**\n * If [T] is an
@[AssociatedObjectKey]-annotated annotation class and [this] class is annotated with @[T] (`S::class`),\n * returns
object `S`.\n *\n * Otherwise returns `null`.\n *\n@ExperimentalAssociatedObjects\npublic inline fun <reified T :
Annotation> KClass<*>.findAssociatedObject(): Any? =\n this.findAssociatedObject(T::class)","/*\n * Copyright
2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\npackage kotlin.js\n\nimport
getKClass\n\nimport kotlin.reflect.KClass\n\nimport kotlin.reflect.js.internal.KClassImpl\n\n\n/**\n * Represents the
constructor of a class. Instances of `JsClass` can be passed to JavaScript APIs that expect a constructor reference.\n
*\nexternal interface JsClass<T : Any> {\n //**\n * Returns the unqualified name of the class represented by
this instance.\n * val name: String\n}\n\n/**\n * Obtains a constructor reference for the given `KClass`.\n
*\nval <T : Any> KClass<T>.js: JsClass<T>\n get() = (this as KClassImpl<T>).jClass\n\n/**\n * Obtains a
`KClass` instance for the given constructor reference.\n *\nval <T : Any> JsClass<T>.kotlin: KClass<T>\n get()
= getKClass(this)\n","/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\npackage kotlin.reflect.js.internal\n\nimport kotlin.reflect.*\n\ninternal abstract
class KClassImpl<T : Any>(\n internal open val jClass: JsClass<T>\n) : KClass<T> {\n\n override val
qualifiedName: String?\n get() = TODO()\n\n override fun equals(other: Any?): Boolean {\n return other
is KClassImpl<*> && jClass == other.jClass\n }\n\n // TODO: use FQN\n override fun hashCode(): Int =
simpleName?.hashCode() ?: 0\n\n override fun toString(): String {\n // TODO: use FQN\n return "\"class
$simpleName\""n }\n}\n\ninternal class SimpleKClassImpl<T : Any>(jClass: JsClass<T>) :
KClassImpl<T>(jClass) {\n override val simpleName: String? =
jClass.asDynamic().`$metadata$`.simpleName.unsafeCast<String?>()\n\n override fun isInstance(value: Any?):
Boolean {\n return jsIsType(value, jClass)\n }\n}\n\ninternal class PrimitiveKClassImpl<T : Any>(\n
jClass: JsClass<T>,\n private val givenSimpleName: String,\n private val isInstanceFunction: (Any?) ->
Boolean\n) : KClassImpl<T>(jClass) {\n override fun equals(other: Any?): Boolean {\n if (other !is
PrimitiveKClassImpl<*>) return false\n return super.equals(other) && givenSimpleName ==
other.givenSimpleName\n }\n\n override val simpleName: String? get() = givenSimpleName\n\n override fun
isInstance(value: Any?): Boolean {\n return isInstanceFunction(value)\n }\n}\n\ninternal object
NothingKClassImpl : KClassImpl<Nothing>(js("Object")) {\n override val simpleName: String =
"Nothing"\n\n override fun isInstance(value: Any?): Boolean = false\n\n override val jClass:
JsClass<Nothing>\n get() = throw UnsupportedOperationException("There's no native JS class for Nothing
type")\n\n override fun equals(other: Any?): Boolean = other === this\n\n override fun hashCode(): Int =
0\n}\n\ninternal class ErrorKClass : KClass<Nothing> {\n override val simpleName: String? get() =
error("Unknown simpleName for ErrorKClass")\n\n override val qualifiedName: String? get() = error("Unknown
qualifiedName for ErrorKClass")\n\n override fun isInstance(value: Any?): Boolean = error("Can't check
isInstance on ErrorKClass")\n\n override fun equals(other: Any?): Boolean = other === this\n\n override fun
hashCode(): Int = 0\n}","/*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\npackage kotlin.reflect\n\ninternal actual inline val
KClass<*>.qualifiedOrSimpleName: String?\n get() = simpleName","/*\n * Copyright 2010-2018 JetBrains s.r.o.

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and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n */\n\n// a package is omitted to get declarations directly under
the module\n\n// TODO: Remove once JsReflectionAPIChecker supports more reflection
types\n@file:Suppress("Unsupported")\n\nimport kotlin.reflect.*\nimport
kotlin.reflect.js.internal.*\n\n@JsName("createKType")\n\ninternal fun createKType(\n classifier: KClassifier,\n
arguments: Array<KTypeProjection>,\n isMarkedNullable: Boolean)\n =\n KTypeImpl(classifier,
arguments.asList(), isMarkedNullable)\n\n\n@JsName("createDynamicKType")\n\ninternal fun
createDynamicKType(): KType = DynamicKType\n\n\n@JsName("markKTypeNullable")\n\ninternal fun
markKTypeNullable(kType: KType) = KTypeImpl(kType.classifier!!, kType.arguments,
true)\n\n\n@JsName("createKTypeParameter")\n\ninternal fun createKTypeParameter(\n name: String,\n
upperBounds: Array<KType>,\n variance: String)\n: KTypeParameter {\n val kVariance = when (variance) {\n
"\"in\" -> KVariance.IN\n "\"out\" -> KVariance.OUT\n else -> KVariance.INVARIANT\n }\n\n return
KTypeParameterImpl(name, upperBounds.asList(), kVariance,
false)\n}\n\n\n@JsName("getStarKTypeProjection")\n\ninternal fun getStarKTypeProjection(): KTypeProjection =\n
KTypeProjection.STAR\n\n\n@JsName("createCovariantKTypeProjection")\n\ninternal fun
createCovariantKTypeProjection(type: KType): KTypeProjection =\n
KTypeProjection.covariant(type)\n\n\n@JsName("createInvariantKTypeProjection")\n\ninternal fun
createInvariantKTypeProjection(type: KType): KTypeProjection =\n
KTypeProjection.invariant(type)\n\n\n@JsName("createContravariantKTypeProjection")\n\ninternal fun
createContravariantKTypeProjection(type: KType): KTypeProjection =\n
KTypeProjection.contravariant(type)\n", /*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.reflect.js.internal\n\nimport kotlin.reflect.*\n\ninternal class
KTypeImpl(\n override val classifier: KClassifier,\n override val arguments: List<KTypeProjection>,\n
override val isMarkedNullable: Boolean)\n : KType {\n override fun equals(other: Any?): Boolean =\n other
is KTypeImpl &&\n classifier == other.classifier && arguments == other.arguments &&
isMarkedNullable == other.isMarkedNullable\n\n override fun hashCode(): Int =\n (classifier.hashCode() * 31
+ arguments.hashCode()) * 31 + isMarkedNullable.hashCode()\n\n override fun toString(): String {\n val
kClass = (classifier as? KClass<*>)\n val classifierName = when {\n kClass == null ->
classifier.toString()\n kClass.simpleName != null -> kClass.simpleName\n else -> \"(non-denotable
type)\"\n }\n\n val args =\n if (arguments.isEmpty()) \"\"\n else arguments.joinToString(\" \",
\"<\", \">\") { it.asString() }\n\n val nullable = if (isMarkedNullable) \"?\" else \"\"\n\n return classifierName
+ args + nullable\n }\n\n // TODO: this should be the implementation of KTypeProjection.toString, see KT-
30071\n private fun KTypeProjection.asString(): String {\n if (variance == null) return \"*\n\n return
variance.prefixString() + type.toString()\n }\n}\n\n\ninternal object DynamicKType : KType {\n override val
classifier: KClassifier? = null\n override val arguments: List<KTypeProjection> = emptyList()\n override val
isMarkedNullable: Boolean = false\n override fun toString(): String = \"dynamic\"\n}\n\n\ninternal fun
KVariance.prefixString() =\n when (this) {\n KVariance.INVARIANT -> \"\"\n KVariance.IN -> \"in \"\n
KVariance.OUT -> \"out \"\n }\n", /*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.reflect.js.internal\n\nimport kotlin.reflect.*\n\ninternal data class
KTypeParameterImpl(\n override val name: String,\n override val upperBounds: List<KType>,\n override val
variance: KVariance,\n override val isReified: Boolean)\n : KTypeParameter {\n override fun toString(): String
= name\n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use
of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\npackage kotlin.reflect.js.internal\n\nimport kotlin.js.JsClass\n\n@JsName("PrimitiveClasses")\n\ninternal
object PrimitiveClasses {\n @JsName("anyClass")\n val anyClass =
PrimitiveKClassImpl(js("Object").unsafeCast<JsClass<Any>>(), "Any", { it is Any })\n}

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@JsName("numberClass")\n val numberClass =
PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Number>>(), "Number", { it is Number })\n\n
@JsName("nothingClass")\n val nothingClass = NothingKClassImpl\n\n @JsName("booleanClass")\n val
booleanClass = PrimitiveKClassImpl(js("Boolean").unsafeCast<JsClass<Boolean>>(), "Boolean", { it is Boolean
})\n\n @JsName("byteClass")\n val byteClass =
PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Byte>>(), "Byte", { it is Byte })\n\n
@JsName("shortClass")\n val shortClass = PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Short>>(),
"Short", { it is Short })\n\n @JsName("intClass")\n val intClass =
PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Int>>(), "Int", { it is Int })\n\n
@JsName("floatClass")\n val floatClass = PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Float>>(),
"Float", { it is Float })\n\n @JsName("doubleClass")\n val doubleClass =
PrimitiveKClassImpl(js("Number").unsafeCast<JsClass<Double>>(), "Double", { it is Double })\n\n
@JsName("arrayClass")\n val arrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<Array<*>>(), "Array", { it is Array<*> })\n\n
@JsName("stringClass")\n val stringClass = PrimitiveKClassImpl(js("String").unsafeCast<JsClass<String>>(),
"String", { it is String })\n\n @JsName("throwableClass")\n val throwableClass =
PrimitiveKClassImpl(js("Error").unsafeCast<JsClass<Throwable>>(), "Throwable", { it is Throwable })\n\n
@JsName("booleanArrayClass")\n val booleanArrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<BooleanArray>>(), "BooleanArray", { it is BooleanArray
})\n\n @JsName("charArrayClass")\n val charArrayClass =
PrimitiveKClassImpl(js("UInt16Array").unsafeCast<JsClass<CharArray>>(), "CharArray", { it is CharArray
})\n\n @JsName("byteArrayClass")\n val byteArrayClass =
PrimitiveKClassImpl(js("Int8Array").unsafeCast<JsClass<ByteArray>>(), "ByteArray", { it is ByteArray })\n\n
@JsName("shortArrayClass")\n val shortArrayClass =
PrimitiveKClassImpl(js("Int16Array").unsafeCast<JsClass<ShortArray>>(), "ShortArray", { it is ShortArray
})\n\n @JsName("intArrayClass")\n val intArrayClass =
PrimitiveKClassImpl(js("Int32Array").unsafeCast<JsClass<IntArray>>(), "IntArray", { it is IntArray })\n\n
@JsName("longArrayClass")\n val longArrayClass =
PrimitiveKClassImpl(js("Array").unsafeCast<JsClass<LongArray>>(), "LongArray", { it is LongArray })\n\n
@JsName("floatArrayClass")\n val floatArrayClass =
PrimitiveKClassImpl(js("Float32Array").unsafeCast<JsClass<FloatArray>>(), "FloatArray", { it is FloatArray
})\n\n @JsName("doubleArrayClass")\n val doubleArrayClass =
PrimitiveKClassImpl(js("Float64Array").unsafeCast<JsClass<DoubleArray>>(), "DoubleArray", { it is
DoubleArray })\n\n @JsName("functionClass")\n fun functionClass(arity: Int): KClassImpl<Any> {\n
return functionClasses.get(arity) ?: run {\n val result =
PrimitiveKClassImpl(js("Function").unsafeCast<JsClass<Any>>(), "Function$arity",\n
{ jsTypeOf(it) === "function" && it.asDynamic().length === arity })\n functionClasses.asDynamic()[arity]
= result\n result\n }\n }\n\nprivate val functionClasses =
arrayOfNulls<KClassImpl<Any>>(0), /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n a package is omitted to get declarations directly under the module\n\nimport
kotlin.reflect.*\nimport kotlin.reflect.js.internal.*\n\n@JsName("getKClass")\n\ninternal fun <T : Any>
getKClass(jClass: Any /* JsClass<T> | Array<JsClass<T>> */): KClass<T> {\n return if
(js("Array").isArray(jClass)) {\n getKClassM(jClass.unsafeCast<Array<JsClass<T>>>())\n } else {\n
getKClass1(jClass.unsafeCast<JsClass<T>>())\n }\n}\n\n@JsName("getKClassM")\n\ninternal fun <T : Any>
getKClassM(jClasses: Array<JsClass<T>>): KClass<T> = when (jClasses.size) {\n 1 ->
getKClass1(jClasses[0])\n 0 -> NothingKClassImpl.unsafeCast<KClass<T>>()\n else ->
ErrorKClass().unsafeCast<KClass<T>>()\n }\n\n@JsName("getKClassFromExpression")\n\ninternal fun <T : Any>

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getKClassFromExpression(e: T): KClass<T> = \n  when (jsTypeOf(e)) {\n    \"string\" ->
PrimitiveClasses.stringClass\n    \"number\" -> if (jsBitwiseOr(e, 0).asDynamic() === e)
PrimitiveClasses.intClass else PrimitiveClasses.doubleClass\n    \"boolean\" -> PrimitiveClasses.booleanClass\n
    \"function\" -> PrimitiveClasses.functionClass(e.asDynamic().length)\n    else -> {\n      when {\n        e
is BooleanArray -> PrimitiveClasses.booleanArrayClass\n        e is CharArray ->
PrimitiveClasses.charArrayClass\n        e is ByteArray -> PrimitiveClasses.byteArrayClass\n        e is
ShortArray -> PrimitiveClasses.shortArrayClass\n        e is IntArray -> PrimitiveClasses.intArrayClass\n
        e is LongArray -> PrimitiveClasses.longArrayClass\n        e is FloatArray ->
PrimitiveClasses.floatArrayClass\n        e is DoubleArray -> PrimitiveClasses.doubleArrayClass\n        e is
KClass<*> -> KClass::class\n        e is Array<*> -> PrimitiveClasses.arrayClass\n        else -> {\n
        val constructor = js(\"Object\").getPrototypeOf(e).constructor\n        when {\n          constructor
=== js(\"Object\") -> PrimitiveClasses.anyClass\n          constructor === js(\"Error\") ->
PrimitiveClasses.throwableClass\n          else -> {\n            val jsClass: JsClass<T> =
constructor\n            getKClass1(jsClass)\n            }\n          }\n        }\n      }\n    }
}.unsafeCast<KClass<T>>()\n\n@JsName(\"getKClass1\")\ninternal fun <T : Any> getKClass1(jClass:
JsClass<T>): KClass<T> {\n  if (jClass === js(\"String\")) return
PrimitiveClasses.stringClass.unsafeCast<KClass<T>>()\n\n  val metadata = jClass.asDynamic().`$metadata$\` \n\n
return if (metadata != null) {\n    if (metadata.`$kClass$\` == null) {\n      val kClass =
SimpleKClassImpl(jClass)\n      metadata.`$kClass$\` = kClass\n      kClass\n    } else {\n
metadata.`$kClass$\` \n    } else {\n      SimpleKClassImpl(jClass)\n    }\n  }, \"/*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.js\n\n/**\n * Exposes
the JavaScript [RegExp
object](https://developer.mozilla.org/en/docs/Web/JavaScript/Reference/Global_Objects/RegExp) to Kotlin.\n
*\n\n@Suppress(\"NOT_DOCUMENTED\")\npublic external class RegExp(pattern: String, flags: String? =
definedExternally) {\n\n  public fun test(str: String): Boolean\n\n  public fun exec(str: String): RegExpMatch?\n\n
  public override fun toString(): String\n\n  /**\n   * The lastIndex is a read/write integer property of regular
expressions that specifies the index at which to start the next match.\n   */\n\n  public var lastIndex: Int\n\n  public
val global: Boolean\n  public val ignoreCase: Boolean\n  public val multiline: Boolean\n}\n\n/**\n * Resets the
regular expression so that subsequent [RegExp.test] and [RegExp.exec] calls will match starting with the beginning
of the input string.\n */\n\npublic fun RegExp.reset() {\n  lastIndex = 0\n}\n\n// TODO: Inherit from array or
introduce asArray() extension\n\n/**\n * Represents the return value of [RegExp.exec].\n
*\n\n@Suppress(\"NOT_DOCUMENTED\")\npublic external interface RegExpMatch {\n  public val index: Int\n
public val input: String\n  public val length: Int\n}\n\n/**\n * Returns the entire text matched by [RegExp.exec] if
the [index] parameter is 0, or the text matched by the capturing parenthesis\n * at the given index.\n */\n\npublic inline
operator fun RegExpMatch.get(index: Int): String? = asDynamic()[index]\n\n/**\n * Converts the result of
[RegExp.exec] to an array where the first element contains the entire matched text and each subsequent\n * element
is the text matched by each capturing parenthesis.\n */\n\npublic inline fun RegExpMatch.asArray(): Array<out
String?> = unsafeCast<Array<out String?>>()\n\n\", \"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin.sequences\n\ninternal actual class
ConstrainedOnceSequence<T> actual constructor(sequence: Sequence<T>) : Sequence<T> {\n  private var
sequenceRef: Sequence<T>? = sequence\n\n  actual override fun iterator(): Iterator<T> {\n    val sequence =
sequenceRef ?: throw IllegalStateException(\"This sequence can be consumed only once.\")\n    sequenceRef =
null\n    return sequence.iterator()\n  }\n}\n\n\", \"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n@SinceKotlin(\"1.5\")\npublic actual enum
class CharCategory(internal val value: Int, public actual val code: String) {\n  /**\n   * General category \"Cn\" in

```

```

the Unicode specification.\n *^n UNASSIGNED(0, \"Cn\"),\n\n /**\n * General category \"Lu\" in the
Unicode specification.\n *^n UPPERCASE_LETTER(1, \"Ll\"),\n\n /**\n * General category \"Ll\" in the
Unicode specification.\n *^n LOWERCASE_LETTER(2, \"Ll\"),\n\n /**\n * General category \"Ll\" in the
Unicode specification.\n *^n TITLECASE_LETTER(3, \"Ll\"),\n\n /**\n * General category \"Lm\" in the
Unicode specification.\n *^n MODIFIER_LETTER(4, \"Lm\"),\n\n /**\n * General category \"Lo\" in the
Unicode specification.\n *^n OTHER_LETTER(5, \"Lo\"),\n\n /**\n * General category \"Mn\" in the
Unicode specification.\n *^n NON_SPACING_MARK(6, \"Mn\"),\n\n /**\n * General category \"Me\" in
the Unicode specification.\n *^n ENCLOSING_MARK(7, \"Mc\"),\n\n /**\n * General category \"Mc\" in
the Unicode specification.\n *^n COMBINING_SPACING_MARK(8, \"Mc\"),\n\n /**\n * General
category \"Nd\" in the Unicode specification.\n *^n DECIMAL_DIGIT_NUMBER(9, \"Nd\"),\n\n /**\n *
General category \"Nl\" in the Unicode specification.\n *^n LETTER_NUMBER(10, \"Nl\"),\n\n /**\n *
General category \"No\" in the Unicode specification.\n *^n OTHER_NUMBER(11, \"No\"),\n\n /**\n *
General category \"Zs\" in the Unicode specification.\n *^n SPACE_SEPARATOR(12, \"Zs\"),\n\n /**\n *
General category \"Zl\" in the Unicode specification.\n *^n LINE_SEPARATOR(13, \"Zl\"),\n\n /**\n *
General category \"Zp\" in the Unicode specification.\n *^n PARAGRAPH_SEPARATOR(14, \"Zp\"),\n\n
/**\n * General category \"Cc\" in the Unicode specification.\n *^n CONTROL(15, \"Cc\"),\n\n /**\n *
General category \"Cf\" in the Unicode specification.\n *^n FORMAT(16, \"Cf\"),\n\n /**\n * General
category \"Co\" in the Unicode specification.\n *^n PRIVATE_USE(18, \"Co\"),\n\n /**\n * General
category \"Cs\" in the Unicode specification.\n *^n SURROGATE(19, \"Cs\"),\n\n /**\n * General category
\"Pd\" in the Unicode specification.\n *^n DASH_PUNCTUATION(20, \"Pd\"),\n\n /**\n * General
category \"Ps\" in the Unicode specification.\n *^n START_PUNCTUATION(21, \"Ps\"),\n\n /**\n *
General category \"Pe\" in the Unicode specification.\n *^n END_PUNCTUATION(22, \"Pe\"),\n\n /**\n *
General category \"Pc\" in the Unicode specification.\n *^n CONNECTOR_PUNCTUATION(23, \"Pc\"),\n\n
/**\n * General category \"Po\" in the Unicode specification.\n *^n OTHER_PUNCTUATION(24,
\"Po\"),\n\n /**\n * General category \"Sm\" in the Unicode specification.\n *^n MATH_SYMBOL(25,
\"Sm\"),\n\n /**\n * General category \"Sc\" in the Unicode specification.\n *^n
CURRENCY_SYMBOL(26, \"Sc\"),\n\n /**\n * General category \"Sk\" in the Unicode specification.\n *^n
MODIFIER_SYMBOL(27, \"Sk\"),\n\n /**\n * General category \"So\" in the Unicode specification.\n *^n
OTHER_SYMBOL(28, \"So\"),\n\n /**\n * General category \"Pi\" in the Unicode specification.\n *^n
INITIAL_QUOTE_PUNCTUATION(29, \"Pi\"),\n\n /**\n * General category \"Pf\" in the Unicode
specification.\n *^n FINAL_QUOTE_PUNCTUATION(30, \"Pf\");\n\n /**\n * Returns `true` if [char]
character belongs to this category.\n *^n public actual operator fun contains(char: Char): Boolean =
char.getCategoryValue() == this.value\n\n companion object {\n    internal fun valueOf(category: Int):
CharCategory =\n        when (category) {\n            in 0..16 -> values()[category]\n            in 18..30 ->
values()[category - 1]\n            else -> throw IllegalArgumentException(\"Category #\$category is not defined.\")\n        }\n    }\n\n }\"/>\n\n /**\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n
* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*^n\npackage kotlin.text\n\n/**\n * The exception thrown when a character encoding or decoding error occurs.\n
*^n\n@SinceKotlin(\"1.4\")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic actual open class
CharacterCodingException(message: String?) : Exception(message) {\n    actual constructor() : this(null)\n}\n\n\"/>\n\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *^n\npackage
kotlin.text\n\n/**\n * A mutable sequence of characters.\n *^n * String builder can be used to efficiently perform
multiple string manipulation operations.\n *^n\npublic actual class StringBuilder actual constructor(content: String) :
Appendable, CharSequence {\n    /**\n     * Constructs an empty string builder with the specified initial [capacity].\n
*\n     * In Kotlin/JS implementation of StringBuilder the initial capacity has no effect on the further performance
of operations.\n     *\n     * actual constructor(capacity: Int) : this() {\n     }\n\n     /**\n     * Constructs a string builder that
contains the same characters as the specified [content] char sequence.\n     *\n     * actual constructor(content:

```

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CharSequence) : this(content.toString()) {}
/** Constructs an empty string builder. */
actual constructor():
this("")
private var string: String = if (content != undefined) content else ""
actual override val
length: Int
get() = string.asDynamic().length
actual override fun get(index: Int): Char =
string.getOrElse(index) { throw IndexOutOfBoundsException("index: $index, length: $length") }
actual
override fun subSequence(startIndex: Int, endIndex: Int): CharSequence = string.substring(startIndex, endIndex)
actual override fun append(value: Char): StringBuilder {
string += value
return this
}
actual
override fun append(value: CharSequence?): StringBuilder {
string += value.toString()
return this
}
actual override fun append(value: CharSequence?, startIndex: Int, endIndex: Int): StringBuilder =
this.appendRange(value ?: "", startIndex, endIndex)
/**
 * Reverses the contents of this string builder
and returns this instance.
 * Surrogate pairs included in this string builder are treated as single
characters.
 * Therefore, the order of the high-low surrogates is never reversed.
 * Note that the reverse
operation may produce new surrogate pairs that were unpaired low-surrogates and high-surrogates before the
operation.
 * For example, reversing "\uDC00\uD800" produces "\uD800\uDC00" which is a valid
surrogate pair.
 */
actual fun reverse(): StringBuilder {
var reversed = ""
var index =
string.length - 1
while (index >= 0) {
val low = string[index--]
if (low.isLowSurrogate() &&
index >= 0) {
val high = string[index--]
if (high.isHighSurrogate()) {
reversed =
reversed + high + low
} else {
reversed = reversed + low + high
}
} else {
reversed += low
}
}
string = reversed
return this
}
/**
 * Appends the string representation of the specified object [value] to this string builder and returns this instance.
 * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,
 * and then that string was appended to this string builder.
 */
actual fun append(value: Any?): StringBuilder {
string += value.toString()
return this
}
/**
 * Appends the string representation of the
specified boolean [value] to this string builder and returns this instance.
 * The overall effect is exactly as
if the [value] were converted to a string by the `value.toString()` method,
 * and then that string was appended to
this string builder.
 */
@SinceKotlin("1.3")
actual fun append(value: Boolean): StringBuilder {
string += value
return this
}
/**
 * Appends characters in the specified character array [value] to
this string builder and returns this instance.
 * Characters are appended in order, starting at the index 0.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun append(value:
CharArray): StringBuilder {
string += value.concatToString()
return this
}
@Deprecated("Provided for binary compatibility.", level = DeprecationLevel.HIDDEN)
fun append(value:
String): StringBuilder = append(value)
/**
 * Appends the specified string [value] to this string builder and
returns this instance.
 * If [value] is `null`, then the four characters `null` are appended.
 */
@SinceKotlin("1.3")
actual fun append(value: String?): StringBuilder {
this.string += value ?: ""
return this
}
/**
 * Returns the current capacity of this string builder.
 * The capacity is the
maximum length this string builder can have before an allocation occurs.
 * In Kotlin/JS implementation
of StringBuilder the value returned from this method may not indicate the actual size of the backing storage.
 */
@SinceKotlin("1.3")
@ExperimentalStdlibApi
@Deprecated("Obtaining StringBuilder capacity is
not supported in JS and common code.", level = DeprecationLevel.ERROR)
actual fun capacity(): Int =
length
/**
 * Ensures that the capacity of this string builder is at least equal to the specified
[minimumCapacity].
 * If the current capacity is less than the [minimumCapacity], a new backing storage
is allocated with greater capacity.
 * Otherwise, this method takes no action and simply returns.
 * In
Kotlin/JS implementation of StringBuilder the size of the backing storage is not extended to comply the given
[minimumCapacity],
 * thus calling this method has no effect on the further performance of operations.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual fun
ensureCapacity(minimumCapacity: Int) {}
/**
 * Returns the index within this string builder of the
first occurrence of the specified [string].
 * Returns -1 if the specified [string] does not occur in this
string builder.
 */
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
actual
fun indexOf(string: String): Int = this.string.asDynamic().indexOf(string)
/**
 * Returns the index within

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this string builder of the first occurrence of the specified [string],\n    * starting at the specified [startIndex].\n    *\n    * Returns -1 if the specified [string] does not occur in this string builder starting at the specified [startIndex].\n\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun indexOf(string: String, startIndex: Int): Int = this.string.asDynamic().indexOf(string, startIndex)\n\n    /**\n    * Returns the index within this string builder of the last occurrence of the specified [string].\n    * The last occurrence of empty string `""` is considered to be at the index equal to `this.length`.\n    *\n    * Returns -1 if the specified [string] does not occur in this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun lastIndexOf(string: String): Int = this.string.asDynamic().lastIndexOf(string)\n\n    /**\n    * Returns the index within this string builder of the last occurrence of the specified [string],\n    * starting from the specified [startIndex] toward the beginning.\n    *\n    * Returns -1 if the specified [string] does not occur in this string builder starting at the specified [startIndex].\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun lastIndexOf(string: String, startIndex: Int): Int {\n        if (string.isEmpty() && startIndex < 0) return -1\n        return this.string.asDynamic().lastIndexOf(string, startIndex)\n    }\n\n    /**\n    * Inserts the string representation of the specified boolean [value] into this string builder at the specified [index] and returns this instance.\n    *\n    * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n    * and then that string was inserted into this string builder at the specified [index].\n    *\n    * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun insert(index: Int, value: Boolean): String Builder {\n        AbstractList.checkPositionIndex(index, length)\n\n        string = string.substring(0, index) + value + string.substring(index)\n        return this\n    }\n\n    /**\n    * Inserts the specified character [value] into this string builder at the specified [index] and returns this instance.\n    *\n    * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun insert(index: Int, value: Char): String Builder {\n        AbstractList.checkPositionIndex(index, length)\n\n        string = string.substring(0, index) + value + string.substring(index)\n        return this\n    }\n\n    /**\n    * Inserts characters in the specified character array [value] into this string builder at the specified [index] and returns this instance.\n    *\n    * The inserted characters go in same order as in the [value] character array, starting at [index].\n    *\n    * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun insert(index: Int, value: CharArray): String Builder {\n        AbstractList.checkPositionIndex(index, length)\n\n        string = string.substring(0, index) + value.concatToString() + string.substring(index)\n        return this\n    }\n\n    /**\n    * Inserts characters in the specified character sequence [value] into this string builder at the specified [index] and returns this instance.\n    *\n    * The inserted characters go in the same order as in the [value] character sequence, starting at [index].\n    *\n    * @param index the position in this string builder to insert at.\n    * @param value the character sequence from which characters are inserted. If [value] is `null`, then the four characters `\\null` are inserted.\n    *\n    * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun insert(index: Int, value: CharSequence?): String Builder {\n        AbstractList.checkPositionIndex(index, length)\n\n        string = string.substring(0, index) + value.toString() + string.substring(index)\n        return this\n    }\n\n    /**\n    * Inserts the string representation of the specified object [value] into this string builder at the specified [index] and returns this instance.\n    *\n    * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n    * and then that string was inserted into this string builder at the specified [index].\n    *\n    * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n    */\n    @SinceKotlin("1.4")\n    @WasExperimental(ExperimentalStdlibApi::class)\n    actual fun insert(index: Int, value: Any?): String Builder {\n        AbstractList.checkPositionIndex(index, length)\n\n        string = string.substring(0, index) + value.toString() + string.substring(index)\n        return this\n    }\n\n    @Deprecated("Provided for binary compatibility.", level =

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DeprecationLevel.HIDDEN)\n fun insert(index: Int, value: String): StringBuilder = insert(index, value)\n\n /**\n * Inserts the string [value] into this string builder at the specified [index] and returns this instance.\n * If [value] is `null`, then the four characters `\\null\\` are inserted.\n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun insert(index: Int, value: String?): StringBuilder {\n    AbstractList.checkPositionIndex(index, length)\n    val toInsert = value ?: "\\null\\`\n    this.string = this.string.substring(0, index) + toInsert + this.string.substring(index)\n    return this\n }\n\n /**\n * Sets the length of this string builder to the specified [newLength].\n * If the [newLength] is less than the current length, it is changed to the specified [newLength].\n * Otherwise, null characters `\\u0000` are appended to this string builder until its length is less than the [newLength].\n * Note that in Kotlin/JS [set] operator function has non-constant execution time complexity.\n * Therefore, increasing length of this string builder and then updating each character by index may slow down your program.\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [newLength] is less than zero.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun setLength(newLength: Int) {\n    if (newLength < 0) {\n        throw IllegalArgumentException("Negative new length: $newLength.")\n    }\n    if (newLength <= length) {\n        string = string.substring(0, newLength)\n    } else {\n        for (i in length until newLength) {\n            string += "\\u0000"\n        }\n    }\n\n /**\n * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [length] (exclusive).\n * @throws IndexOutOfBoundsException if [startIndex] is less than zero or greater than the length of this string builder.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun substring(startIndex: Int): String {\n    AbstractList.checkPositionIndex(startIndex, length)\n    return string.substring(startIndex)\n }\n\n /**\n * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [endIndex] (exclusive).\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun substring(startIndex: Int, endIndex: Int): String {\n    AbstractList.checkBoundsIndexes(startIndex, endIndex, length)\n    return string.substring(startIndex, endIndex)\n }\n\n /**\n * Attempts to reduce storage used for this string builder.\n * If the backing storage of this string builder is larger than necessary to hold its current contents, then it may be resized to become more space efficient.\n * Calling this method may, but is not required to, affect the value of the [capacity] property.\n * In Kotlin/JS implementation of StringBuilder the size of the backing storage is always equal to the length of the string builder.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n actual fun trimToSize() {\n }\n\n override fun toString(): String = string\n\n /**\n * Clears the content of this string builder making it empty and returns this instance.\n * @sample samples.text.Strings.clearStringBuilder\n * ^\n @SinceKotlin("1.3")\n public fun clear(): StringBuilder {\n    string = "\\`\n    return this\n }\n\n /**\n * Sets the character at the specified [index] to the specified [value].\n * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public operator fun set(index: Int, value: Char) {\n    AbstractList.checkElementIndex(index, length)\n    string = string.substring(0, index) + value + string.substring(index + 1)\n }\n\n /**\n * Replaces characters in the specified range of this string builder with characters in the specified string [value] and returns this instance.\n * @param startIndex the beginning (inclusive) of the range to replace.\n * @param endIndex the end (exclusive) of the range to replace.\n * @param value the string to replace with.\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] if [startIndex] is less than zero, greater than the length of this string builder, or `startIndex > endIndex`.\n * ^\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun setRange(startIndex: Int, endIndex: Int, value: String): StringBuilder {\n    checkReplaceRange(startIndex, endIndex, length)\n    this.string = this.string.substring(0, startIndex) + value + this.string.substring(endIndex)\n    return this\n }\n\n private fun

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checkReplaceRange(startIndex: Int, endIndex: Int, length: Int) {\n    if (startIndex < 0 || startIndex > length) {\n        throw IndexOutOfBoundsException("\n        startIndex: $startIndex, length: $length")\n    }\n    if (startIndex > endIndex) {\n        throw IllegalArgumentException("\n        startIndex($startIndex) > endIndex($endIndex)")\n    }\n}\n\n/**\n * Removes the character at the specified [index] from this string builder and returns this instance.\n *\n * If the `Char` at the specified [index] is part of a supplementary code point, this method does not remove the entire supplementary character.\n *\n * @param index the index of `Char` to remove.\n *\n * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n *\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n public fun deleteAt(index: Int): StringBuilder {\n\n    AbstractList.checkElementIndex(index, length)\n\n    string = string.substring(0, index) + string.substring(index + 1)\n    return this\n }\n\n /**\n * Removes characters in the specified range from this string builder and returns this instance.\n *\n * @param startIndex the beginning (inclusive) of the range to remove.\n * @param endIndex the end (exclusive) of the range to remove.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n *\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n public fun deleteRange(startIndex: Int, endIndex: Int): StringBuilder {\n    checkReplaceRange(startIndex, endIndex, length)\n\n    string = string.substring(0, startIndex) + string.substring(endIndex)\n    return this\n }\n\n /**\n * Copies characters from this string builder into the [destination] character array.\n *\n * @param destination the array to copy to.\n * @param destinationOffset the position in the array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive) of the range to copy, 0 by default.\n * @param endIndex the end (exclusive) of the range to copy, length of this string builder by default.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n *\n * @throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n *\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n public fun toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int = this.length) {\n\n    AbstractList.checkBoundsIndexes(startIndex, endIndex, length)\n\n    AbstractList.checkBoundsIndexes(destinationOffset, destinationOffset + endIndex - startIndex, destination.size)\n\n    var dstIndex = destinationOffset\n    for (index in startIndex until endIndex) {\n        destination[dstIndex++] = string[index]\n    }\n}\n\n /**\n * Appends characters in a subarray of the specified character array [value] to this string builder and returns this instance.\n *\n * Characters are appended in order, starting at specified [startIndex].\n *\n * @param value the array from which characters are appended.\n * @param startIndex the beginning (inclusive) of the subarray to append.\n * @param endIndex the end (exclusive) of the subarray to append.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex > endIndex`.\n *\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n public fun appendRange(value: CharArray, startIndex: Int, endIndex: Int): StringBuilder {\n    string += value.concatToString(startIndex, endIndex)\n    return this\n }\n\n /**\n * Appends a subsequence of the specified character sequence [value] to this string builder and returns this instance.\n *\n * @param value the character sequence from which a subsequence is appended.\n * @param startIndex the beginning (inclusive) of the subsequence to append.\n * @param endIndex the end (exclusive) of the subsequence to append.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.\n *\n * @SinceKotlin("1.4")\n * @WasExperimental(ExperimentalStdlibApi::class)\n public fun appendRange(value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder {\n    val stringCsq = value.toString()\n\n    AbstractList.checkBoundsIndexes(startIndex, endIndex, stringCsq.length)\n\n    string += stringCsq.substring(startIndex, endIndex)\n    return this\n }\n\n /**\n * Inserts characters in a subarray of the specified character array [value] into this string builder at the specified [index] and returns this instance.\n *\n
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\* The inserted characters go in same order as in the [value] array, starting at [index].\n \* @param index the position in this string builder to insert at.\n \* @param value the array from which characters are inserted.\n \* @param startIndex the beginning (inclusive) of the subarray to insert.\n \* @param endIndex the end (exclusive) of the subarray to insert.\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n \*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun insertRange(index: Int, value: CharArray, startIndex: Int, endIndex: Int): StringBuilder {\n AbstractList.checkPositionIndex(index, this.length)\n string = string.substring(0, index) + value.concatToString(startIndex, endIndex) + string.substring(index)\n return this\n }\n /\*\*\n \* Inserts characters in a subsequence of the specified character sequence [value] into this string builder at the specified [index] and returns this instance.\n \* The inserted characters go in the same order as in the [value] character sequence, starting at [index].\n \* @param index the position in this string builder to insert at.\n \* @param value the character sequence from which a subsequence is inserted.\n \* @param startIndex the beginning (inclusive) of the subsequence to insert.\n \* @param endIndex the end (exclusive) of the subsequence to insert.\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n \*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n public fun insertRange(index: Int, value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder {\n AbstractList.checkPositionIndex(index, length)\n val stringCsq = value.toString()\n AbstractList.checkBoundsIndexes(startIndex, endIndex, stringCsq.length)\n string = string.substring(0, index) + stringCsq.substring(startIndex, endIndex) + string.substring(index)\n return this\n }\n }\n /\*\*\n \* Clears the content of this string builder making it empty and returns this instance.\n \*/\n @sample samples.text.Strings.clearStringBuilder\n \*/\n @SinceKotlin("1.3")\n @Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER", "NOTHING\_TO\_INLINE")\n public actual inline fun StringBuilder.clear(): StringBuilder = this.clear()\n /\*\*\n \* Sets the character at the specified [index] to the specified [value].\n \* @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n \*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER", "NOTHING\_TO\_INLINE")\n public actual inline operator fun StringBuilder.set(index: Int, value: Char) = this.set(index, value)\n /\*\*\n \* Replaces characters in the specified range of this string builder with characters in the specified string [value] and returns this instance.\n \* @param startIndex the beginning (inclusive) of the range to replace.\n \* @param endIndex the end (exclusive) of the range to replace.\n \* @param value the string to replace with.\n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] if [startIndex] is less than zero, greater than the length of this string builder, or `startIndex > endIndex`.\n \*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER", "NOTHING\_TO\_INLINE")\n public actual inline fun StringBuilder.setRange(startIndex: Int, endIndex: Int, value: String): StringBuilder =\n this.setRange(startIndex, endIndex, value)\n /\*\*\n \* Removes the character at the specified [index] from this string builder and returns this instance.\n \* If the `Char` at the specified [index] is part of a supplementary code point, this method does not remove the entire supplementary character.\n \* @param index the index of `Char` to remove.\n \* @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n \*/\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n @Suppress("EXTENSION\_SHADOWED\_BY\_MEMBER", "NOTHING\_TO\_INLINE")\n public actual inline fun StringBuilder.deleteAt(index: Int): StringBuilder = this.deleteAt(index)\n /\*\*\n \* Removes characters in the specified range from this string builder and returns this instance.\n \* @param startIndex the beginning (inclusive) of the range to remove.\n \* @param endIndex the end (exclusive) of the range to remove.\n \* @throws IndexOutOfBoundsException or

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[IllegalArgumentException] when [startIndex] is out of range of this string builder indices or when `startIndex >
endIndex`.
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\npublic actual inline fun
StringBuilder.deleteRange(startIndex: Int, endIndex: Int): StringBuilder = this.deleteRange(startIndex,
endIndex)\n\n/**\n * Copies characters from this string builder into the [destination] character array.\n *\n *
@param destination the array to copy to.\n * @param destinationOffset the position in the array to copy to, 0 by
default.\n * @param startIndex the beginning (inclusive) of the range to copy, 0 by default.\n * @param endIndex
the end (exclusive) of the range to copy, length of this string builder by default.\n *\n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of this
string builder indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException when the
subrange doesn't fit into the [destination] array starting at the specified [destinationOffset],\n * or when that index is
out of the [destination] array indices range.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE",
"ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\npublic actual inline fun
StringBuilder.toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int =
this.length) =\n this.toCharArray(destination, destinationOffset, startIndex, endIndex)\n\n/**\n * Appends
characters in a subarray of the specified character array [value] to this string builder and returns this instance.\n *\n *
Characters are appended in order, starting at specified [startIndex].\n *\n * @param value the array from which
characters are appended.\n * @param startIndex the beginning (inclusive) of the subarray to append.\n * @param
endIndex the end (exclusive) of the subarray to append.\n *\n * @throws IndexOutOfBoundsException or
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when
`startIndex > endIndex`.
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\npublic actual inline fun
StringBuilder.appendRange(value: CharArray, startIndex: Int, endIndex: Int): StringBuilder =\n
this.appendRange(value, startIndex, endIndex)\n\n/**\n * Appends a subsequence of the specified character
sequence [value] to this string builder and returns this instance.\n *\n * @param value the character sequence from
which a subsequence is appended.\n * @param startIndex the beginning (inclusive) of the subsequence to append.\n
* @param endIndex the end (exclusive) of the subsequence to append.\n *\n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the
[value] character sequence indices or when `startIndex > endIndex`.
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\npublic actual inline fun
StringBuilder.appendRange(value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder =\n
this.appendRange(value, startIndex, endIndex)\n\n/**\n * Inserts characters in a subarray of the specified character
array [value] into this string builder at the specified [index] and returns this instance.\n *\n * The inserted
characters go in same order as in the [value] array, starting at [index].\n *\n * @param index the position in this
string builder to insert at.\n * @param value the array from which characters are inserted.\n * @param startIndex
the beginning (inclusive) of the subarray to insert.\n * @param endIndex the end (exclusive) of the subarray to
insert.\n *\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex]
is out of range of the [value] array indices or when `startIndex > endIndex`. \n * @throws IndexOutOfBoundsException
if [index] is less than zero or greater than the length of this string builder.\n
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA
DOWED_BY_MEMBER", "NOTHING_TO_INLINE")\npublic actual inline fun
StringBuilder.insertRange(index: Int, value: CharArray, startIndex: Int, endIndex: Int): StringBuilder =\n
this.insertRange(index, value, startIndex, endIndex)\n\n/**\n * Inserts characters in a subsequence of the specified

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character sequence [value] into this string builder at the specified [index] and returns this instance.\n \* \n \* The inserted characters go in the same order as in the [value] character sequence, starting at [index].\n \* \n \* @param index the position in this string builder to insert at.\n \* @param value the character sequence from which a subsequence is inserted.\n \* @param startIndex the beginning (inclusive) of the subsequence to insert.\n \* @param endIndex the end (exclusive) of the subsequence to insert.\n \* \n \* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] character sequence indices or when `startIndex > endIndex`.\n \* @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n

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*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@Suppress("EXTENSION_SHA\nDOWED_BY_MEMBER", "NOTHING_TO_INLINE")\npublic actual inline fun\nStringBuilder.insertRange(index: Int, value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder =\nthis.insertRange(index, value, startIndex, endIndex)\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin\nProgramming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be\nfound in the license/LICENSE.txt file.\n * \n * Returns `true` if the content of this\nstring is equal to the word `true`, ignoring case, and `false` otherwise.\n * \n * @Deprecated("Use Kotlin compiler\n1.4 to avoid deprecation warning.")\n * @DeprecatedSinceKotlin(hiddenSince =\n"1.4")\n * @kotlin.internal.InlineOnly\n * public actual inline fun String.toBoolean(): Boolean =\nthis.toBoolean()\n * \n * Returns `true` if this string is not `null` and its content is equal to the word `true`,\nignoring case, and `false` otherwise.\n * \n * There are also strict versions of the function available on non-nullable\nString, [toBooleanStrict] and [toBooleanStrictOrNull].\n * \n * @SinceKotlin("1.4")\n * public actual fun\nString?.toBoolean(): Boolean = this != null && this.lowercase() == `true`\n * \n * Parses the string as a signed\n[Byte] number and returns the result.\n * \n * @throws NumberFormatException if the string is not a valid\nrepresentation of a number.\n * \n * public actual fun String.toByte(): Byte = toByteOrNull() ?:\nnumberFormatError(this)\n * \n * Parses the string as a signed [Byte] number and returns the result.\n * \n * @throws\nNumberFormatException if the string is not a valid representation of a number.\n * \n * @throws\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n * \n * public actual fun\nString.toByte(radix: Int): Byte = toByteOrNull(radix) ?:\nnumberFormatError(this)\n * \n * Parses the string as a\n[Short] number and returns the result.\n * \n * @throws NumberFormatException if the string is not a valid\nrepresentation of a number.\n * \n * public actual fun String.toShort(): Short = toShortOrNull() ?:\nnumberFormatError(this)\n * \n * Parses the string as a [Short] number and returns the result.\n * \n * @throws\nNumberFormatException if the string is not a valid representation of a number.\n * \n * @throws\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n * \n * public actual fun\nString.toShort(radix: Int): Short = toShortOrNull(radix) ?:\nnumberFormatError(this)\n * \n * Parses the string as\nan [Int] number and returns the result.\n * \n * @throws NumberFormatException if the string is not a valid\nrepresentation of a number.\n * \n * public actual fun String.toInt(): Int = toIntOrNull() ?:\nnumberFormatError(this)\n * \n * Parses the string as an [Int] number and returns the result.\n * \n * @throws\nNumberFormatException if the string is not a valid representation of a number.\n * \n * @throws\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n * \n * public actual fun\nString.toInt(radix: Int): Int = toIntOrNull(radix) ?:\nnumberFormatError(this)\n * \n * Parses the string as a [Long]\nnumber and returns the result.\n * \n * @throws NumberFormatException if the string is not a valid representation of a\nnumber.\n * \n * public actual fun String.toLong(): Long = toLongOrNull() ?:\nnumberFormatError(this)\n * \n * Parses the string as a [Long] number and returns the result.\n * \n * @throws NumberFormatException if the string is not\na valid representation of a number.\n * \n * @throws IllegalArgumentException when [radix] is not a valid radix for\nstring to number conversion.\n * \n * public actual fun String.toLong(radix: Int): Long = toLongOrNull(radix) ?:\nnumberFormatError(this)\n * \n * Parses the string as a [Double] number and returns the result.\n * \n * @throws\nNumberFormatException if the string is not a valid representation of a number.\n * \n * public actual fun\nString.toDouble(): Double = (+((this.asDynamic())).unsafeCast<Double>().also { \n if (it.isNaN() && !this.isNaN())\n || it == 0.0 && this.isBlank()})\n * \n * Parses the string as a [Float] number
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and returns the result.  
 \* @throws NumberFormatException if the string is not a valid representation of a number.  
 \*  
 @kotlin.internal.InlineOnly  
 public actual inline fun String.toFloat(): Float = toDouble().unsafeCast<Float>()  
 \*  
 \* Parses the string as a [Double] number and returns the result  
 \* or `null` if the string is not a valid representation of a number.  
 \*  
 public actual fun String.toDoubleOrNull(): Double? = +(this.asDynamic()).unsafeCast<Double>().takeIf { !it.isNaN() && !this.isNaN() || it == 0.0 && this.isBlank() }  
 \*  
 \* Parses the string as a [Float] number and returns the result  
 \* or `null` if the string is not a valid representation of a number.  
 \*  
 @kotlin.internal.InlineOnly  
 public actual inline fun String.toFloatOrNull(): Float? = toDoubleOrNull().unsafeCast<Float?>()  
 \*  
 \* Returns a string representation of this [Byte] value in the specified [radix].  
 \*  
 \* @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.  
 \*  
 @SinceKotlin("1.2")  
 @kotlin.internal.InlineOnly  
 public actual inline fun Byte.toString(radix: Int): String = this.toInt().toString(radix)  
 \*  
 \* Returns a string representation of this [Short] value in the specified [radix].  
 \*  
 \* @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.  
 \*  
 @SinceKotlin("1.2")  
 @kotlin.internal.InlineOnly  
 public actual inline fun Short.toString(radix: Int): String = this.toInt().toString(radix)  
 \*  
 \* Returns a string representation of this [Int] value in the specified [radix].  
 \*  
 \* @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.  
 \*  
 @SinceKotlin("1.2")  
 public actual fun Int.toString(radix: Int): String = asDynamic().toString(checkRadix(radix))  
 private fun String.isNaN(): Boolean = when (this.lowercase()) {  
 "nan" -> true  
 "+nan" -> true  
 "-nan" -> true  
 else -> false  
 }  
 \*  
 \* Checks whether the given [radix] is valid radix for string to number and number to string conversion.  
 \*  
 @PublishedApi  
 internal actual fun checkRadix(radix: Int): Int {  
 if (radix !in 2..36) {  
 throw IllegalArgumentException("radix \$radix was not in valid range 2..36")  
 }  
 return radix  
 }  
 internal actual fun digitOf(char: Char, radix: Int): Int = when {  
 char >= '0' && char <= '9' -> char - '0'  
 char >= 'A' && char <= 'Z' -> char - 'A' + 10  
 char >= 'a' && char <= 'z' -> char - 'a' + 10  
 char < "\u0080" -> -1  
 char >= "\uFF21" && char <= "\uFF3A" -> char - "\uFF21" + 10 // full-width latin capital letter  
 char >= "\uFF41" && char <= "\uFF5A" -> char - "\uFF41" + 10 // full-width latin small letter  
 else -> char.digitToIntImpl()  
 }.let { if (it >= radix) -1 else it }  
 }  
 \*  
 \* Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.  
 \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.  
 \*  
 package kotlin.text  
 import kotlin.js.RegExp  
 \*  
 \* Provides enumeration values to use to set regular expression options.  
 \*  
 public actual enum class RegexOptions(val value: String) {  
 /\*\* Enables case-insensitive matching. \*/  
 IGNORE\_CASE("i"),  
 /\*\* Enables multiline mode. \*/  
 MULTILINE("m")  
 }  
 \*  
 \* In multiline mode the expressions `^` and `\$` match just after or just before, respectively, a line terminator or the end of the input sequence.  
 \*  
 MULTILINE("m")  
 }  
 private fun Iterable<RegexOption>.toFlags(prepend: String): String = joinToString("\", prefix = prepend) { it.value }  
 \*  
 \* Represents the results from a single capturing group within a [MatchResult] of [Regex].  
 \*  
 \* @param value The value of captured group.  
 \*  
 public actual data class MatchGroup(actual val value: String)  
 \*  
 \* Represents a compiled regular expression.  
 \*  
 \* Provides functions to match strings in text with a pattern, replace the found occurrences and split text around matches.  
 \*  
 \* For pattern syntax reference see [MDN RegExp](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\_Objects/RegExp#Special\_characters\_meaning\_in\_regular\_expressions)  
 \*  
 \* and  
 [http://www.w3schools.com/jsref/jsref\_obj\_regexp.asp](https://www.w3schools.com/jsref/jsref\_obj\_regexp.asp)  
 \*  
 \* Note that `RegExp` objects under the hood are constructed with [the `u` flag](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\_Objects/RegExp/unicode)  
 \*  
 \* that enables Unicode-related features in regular expressions. This also makes the pattern syntax more strict,  
 \*  
 \* for example, prohibiting unnecessary escape sequences.  
 \*  
 \*  
 \* @constructor Creates a regular expression from the specified [pattern] string and the specified set of [options].  
 \*  
 public actual class Regex actual constructor(pattern: String, options: Set<RegexOption>) {  
 /\*\* Creates a regular expression from the specified [pattern] string and the specified single [option]. \*/  
 public actual constructor(pattern: String, option: RegexOptions) : this(pattern, setOf(option))  
 /\*\* Creates a regular expression from the specified [pattern] string

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and the default options. */\n public actual constructor(pattern: String) : this(pattern, emptySet())\n\n /** The
pattern string of this regular expression. */\n public actual val pattern: String = pattern\n /** The set of options
that were used to create this regular expression. */\n public actual val options: Set<RegexOption> =
options.toSet()\n private val nativePattern: RegExp = RegExp(pattern, options.toFlags("\gu"))\n private var
nativeStickyPattern: RegExp? = null\n private fun initStickyPattern(): RegExp =\n nativeStickyPattern ?:
RegExp(pattern, options.toFlags("\yu")).also { nativeStickyPattern = it }\n\n private var
nativeMatchesEntirePattern: RegExp? = null\n private fun initMatchesEntirePattern(): RegExp =\n nativeMatchesEntirePattern ?: run {\n if (pattern.startsWith('^') && pattern.endsWith('$'))\n
nativePattern\n else\n return RegExp("^${pattern.trimStart('^').trimEnd('$')}$",
options.toFlags("\gu"))\n }.also { nativeMatchesEntirePattern = it }\n\n /** Indicates whether the regular
expression matches the entire [input]. */\n public actual infix fun matches(input: CharSequence): Boolean {\n
nativePattern.reset()\n val match = nativePattern.exec(input.toString())\n return match != null &&
match.index == 0 && nativePattern.lastIndex == input.length\n }\n\n /** Indicates whether the regular
expression can find at least one match in the specified [input]. */\n public actual fun containsMatchIn(input:
CharSequence): Boolean {\n nativePattern.reset()\n return nativePattern.test(input.toString())\n }\n\n
@SinceKotlin("1.5")\n @ExperimentalStdlibApi\n public actual fun matchesAt(input: CharSequence, index:
Int): Boolean {\n if (index < 0 || index > input.length) {\n throw IndexOutOfBoundsException("index
out of bounds: $index, input length: ${input.length}")\n }\n val pattern = initStickyPattern()\n
pattern.lastIndex = index\n return pattern.test(input.toString())\n }\n\n /**\n * Returns the first match of a
regular expression in the [input], beginning at the specified [startIndex].\n * @param startIndex An index to
start search with, by default 0. Must be not less than zero and not greater than `input.length`\n * @return An
instance of [MatchResult] if match was found or `null` otherwise.\n * @throws IndexOutOfBoundsException if
[startIndex] is less than zero or greater than the length of the [input] char sequence.\n * @sample
samples.text.Regexps.find\n */\n
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n public actual fun find(input:
CharSequence, startIndex: Int = 0): MatchResult? {\n if (startIndex < 0 || startIndex > input.length) {\n
throw IndexOutOfBoundsException("Start index out of bounds: $startIndex, input length: ${input.length}")\n
}\n return nativePattern.findNext(input.toString(), startIndex, nativePattern)\n }\n\n /**\n * Returns a
sequence of all occurrences of a regular expression within the [input] string, beginning at the specified
[startIndex].\n * @throws IndexOutOfBoundsException if [startIndex] is less than zero or greater than the
length of the [input] char sequence.\n * @sample samples.text.Regexps.findAll\n */\n
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n public actual fun findAll(input:
CharSequence, startIndex: Int = 0): Sequence<MatchResult> {\n if (startIndex < 0 || startIndex > input.length)
{\n throw IndexOutOfBoundsException("Start index out of bounds: $startIndex, input length:
${input.length}")\n }\n return generateSequence({ find(input, startIndex) }, { match -> match.next() })\n
}\n\n /**\n * Attempts to match the entire [input] CharSequence against the pattern.\n * @return An
instance of [MatchResult] if the entire input matches or `null` otherwise.\n */\n public actual fun
matchEntire(input: CharSequence): MatchResult? =\n initMatchesEntirePattern().findNext(input.toString(), 0,
nativePattern)\n\n @SinceKotlin("1.5")\n @ExperimentalStdlibApi\n public actual fun matchAt(input:
CharSequence, index: Int): MatchResult? {\n if (index < 0 || index > input.length) {\n throw
IndexOutOfBoundsException("index out of bounds: $index, input length: ${input.length}")\n }\n return
initStickyPattern().findNext(input.toString(), index, nativePattern)\n }\n\n /**\n * Replaces all occurrences
of this regular expression in the specified [input] string with specified [replacement] expression.\n * @param
replacement The replacement string. The replacement string may contain references to the captured groups during a
match. Occurrences of `$index` in the replacement string will be substituted with the subsequences corresponding
to the captured groups with the specified index.\n * @param index The first digit after '$' is always treated as
part of group reference. Subsequent digits are incorporated into `index` only if they would form a valid group
reference. Only the digits '0'..'9' are considered as potential components of the group reference. Note that
indexes of captured groups start from 1, and the

```

group with index 0 is the whole match.

- \* Backslash character `\` can be used to include the succeeding character as a literal in the replacement string, e.g., `\\$` or `\\\\`.
- \* `[Regex.escapeReplacement]` can be used if [replacement] have to be treated as a literal string.
- \* Note that referring named capturing groups by name is currently not supported in Kotlin/JS.
- \* However, you can still refer them by index.

`@param` input the char sequence to find matches of this regular expression in

`@param` replacement the expression to replace found matches with

`@return` the result of replacing each occurrence of this regular expression in [input] with the result of evaluating the [replacement] expression

`@throws` RuntimeException if [replacement] expression is malformed, or capturing group with specified ``name`` or ``index`` does not exist

```

public actual fun
replace(input: CharSequence, replacement: String): String {
    if (!replacement.contains("\\\\") &&
        !replacement.contains('$')) {
        return input.toString().nativeReplace(nativePattern, replacement)
    }
    return replace(input) { substituteGroupRefs(it, replacement) }
}

```

`replaceAll` Replaces all occurrences of this regular expression in the specified [input] string with the result of

the given function [transform] that takes [MatchResult] and returns a string to be used as a

replacement for that match.

```

public actual fun
replace(input: CharSequence, transform: (MatchResult) -> CharSequence): String {
    var match = find(input)
    if (match == null) return input.toString()
    var lastStart = 0
    val length = input.length
    val sb =
        StringBuilder(length)
    do {
        val foundMatch = match!!
        sb.append(input, lastStart,
            foundMatch.range.start)
        sb.append(transform(foundMatch))
        lastStart =
            foundMatch.range.endInclusive + 1
        match = foundMatch.next()
    } while (lastStart < length && match
        != null)
    if (lastStart < length) {
        sb.append(input, lastStart, length)
    }
    return
        sb.toString()
}

```

`replaceFirst` Replaces the first occurrence of this regular expression in the specified [input] string with specified [replacement] expression.

- \* The replacement string may contain references to the captured groups during a match. Occurrences of ``$index`` in the replacement string will be substituted with the subsequences corresponding to the captured groups with the specified index.
- \* The first digit after '\$' is always treated as part of group reference. Subsequent digits are incorporated
- \* into ``index`` only if they would form a valid group reference. Only the digits '0'..'9' are considered as potential components
- \* of the group reference. Note that indexes of captured groups start from 1, and the group with index 0 is the whole match.

- \* Backslash character `\` can be used to include the succeeding character as a literal in the replacement string, e.g., `\\$` or `\\\\`.
- \* `[Regex.escapeReplacement]` can be used if [replacement] have to be treated as a literal string.
- \* Note that referring named capturing groups by name is not supported currently in Kotlin/JS.
- \* However, you can still refer them by index.

`@param` input the char sequence to find a match of this regular expression in

`@param` replacement the expression to replace the found match with

`@return` the result of replacing the first occurrence of this regular expression in [input] with the result of evaluating the [replacement] expression

`@throws` RuntimeException if [replacement] expression is malformed, or capturing group with specified ``name`` or ``index`` does not exist

```

public actual fun replaceFirst(input: CharSequence, replacement: String): String {
    if (!replacement.contains("\\\\") && !replacement.contains('$')) {
        val nonGlobalOptions =
            options.toFlags("\"u\")
        return input.toString().nativeReplace(RegExp(pattern, nonGlobalOptions),
            replacement)
    }
    val match = find(input) ?: return input.toString()
    return buildString {
        append(input.substring(0, match.range.first))
        append(substituteGroupRefs(match, replacement))
        append(input.substring(match.range.last + 1, input.length))
    }
}

```

`split` Splits the [input] CharSequence to a list of strings around matches of this regular expression.

- \* `@param` limit Non-negative value specifying the maximum number of substrings the string can be split to.
- \* Zero by default means no limit is set.

```

@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
split(input: CharSequence, limit: Int = 0): List<String> {
    requireNonNegativeLimit(limit)
    val matches =
        findAll(input).let { if (limit == 0) it else it.take(limit - 1) }
    val result = mutableListOfOf<String>()
    var
        lastStart = 0
    for (match in matches) {
        result.add(input.subSequence(lastStart,
            match.range.start).toString())
        lastStart = match.range.endInclusive + 1
    }
    result.add(input.subSequence(lastStart, input.length).toString())
    return result
}

```

`splitAround` Splits the [input] CharSequence to a sequence of strings around matches of this regular expression.

- \* `@param` limit



```

groupIndex = replacement.substring(index, endIndex).toInt()\n\n        if (groupIndex >=
match.groupValues.size)\n            throw IndexOutOfBoundsException("Group with index $groupIndex does not
exist()")\n\n        result.append(match.groupValues[groupIndex])\n        index = endIndex\n    } else {\n
result.append(char)\n    }\n }\n return result.toString()\n}\n\nprivate fun String.readGroupIndex(startIndex:
Int, groupCount: Int): Int {\n    // at least one digit after '$' is always captured\n    var index = startIndex + 1\n    var
groupIndex = this[startIndex] - '0'\n\n    // capture the largest valid group index\n    while (index < length &&
this[index] in '0'..'9') {\n        val newGroupIndex = (groupIndex * 10) + (this[index] - '0')\n        if (newGroupIndex
in 0 until groupCount) {\n            groupIndex = newGroupIndex\n            index++\n        } else {\n            break\n
}\n    }\n    return index\n}\n\n"/\n\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n@file:Suppress("EXTENSI
ON_SHADOWED_BY_MEMBER")\n\npackage kotlin.text\n\nimport kotlin.contracts.*\n\n/**\n * A mutable
sequence of characters.\n * \n * String builder can be used to efficiently perform multiple string manipulation
operations.\n * \n * expect class StringBuilder : Appendable, CharSequence {\n    /** Constructs an empty string
builder. *\n    constructor()\n\n    /** Constructs an empty string builder with the specified initial [capacity]. *\n
    constructor(capacity: Int)\n\n    /** Constructs a string builder that contains the same characters as the specified
[content] char sequence. *\n    constructor(content: CharSequence)\n\n    /** Constructs a string builder that
contains the same characters as the specified [content] string. *\n    @SinceKotlin("1.3")\n\n    @ExperimentalStdlibApi\n    constructor(content: String)\n\n    override val length: Int\n\n    override operator fun
get(index: Int): Char\n\n    override fun subSequence(startIndex: Int, endIndex: Int): CharSequence\n\n    override
fun append(value: Char): StringBuilder\n\n    override fun append(value: CharSequence?): StringBuilder\n\n    override
fun append(value: CharSequence?, startIndex: Int, endIndex: Int): StringBuilder\n\n    /**\n     * Reverses the
contents of this string builder and returns this instance.\n     * \n     * Surrogate pairs included in this string builder
are treated as single characters.\n     * Therefore, the order of the high-low surrogates is never reversed.\n     * \n     *
Note that the reverse operation may produce new surrogate pairs that were unpaired low-surrogates and high-
surrogates before the operation.\n     * For example, reversing "\uDC00\uD800" produces "\uD800\uDC00"
which is a valid surrogate pair.\n     * \n     * fun reverse(): StringBuilder\n\n     /**\n     * Appends the string
representation of the specified object [value] to this string builder and returns this instance.\n     * \n     * The overall
effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n     * and then that
string was appended to this string builder.\n     * \n     * fun append(value: Any?): StringBuilder\n\n     /**\n     *
Appends the string representation of the specified boolean [value] to this string builder and returns this instance.\n
     * \n     * The overall effect is exactly as if the [value] were converted to a string by the `value.toString()` method,\n
     * and then that string was appended to this string builder.\n     * \n     * @SinceKotlin("1.3")\n     fun append(value:
Boolean): StringBuilder\n\n     /**\n     * Appends characters in the specified character array [value] to this string
builder and returns this instance.\n     * \n     * Characters are appended in order, starting at the index 0.\n     *\n     @SinceKotlin("1.4")\n     @WasExperimental(ExperimentalStdlibApi::class)\n     fun append(value: CharArray):
StringBuilder\n\n     /**\n     * Appends the specified string [value] to this string builder and returns this instance.\n
     * \n     * If [value] is `null`, then the four characters `null` are appended.\n     * \n     * @SinceKotlin("1.3")\n     fun
append(value: String?): StringBuilder\n\n     /**\n     * Returns the current capacity of this string builder.\n     * \n     *
The capacity is the maximum length this string builder can have before an allocation occurs.\n     *\n     @SinceKotlin("1.3")\n     @ExperimentalStdlibApi\n     @Deprecated("Obtaining StringBuilder capacity is not
supported in JS and common code.", level = DeprecationLevel.ERROR)\n     fun capacity(): Int\n\n     /**\n     *
Ensures that the capacity of this string builder is at least equal to the specified [minimumCapacity].\n     * \n     * If
the current capacity is less than the [minimumCapacity], a new backing storage is allocated with greater capacity.\n
     * Otherwise, this method takes no action and simply returns.\n     * \n     * @SinceKotlin("1.4")\n     @WasExperimental(ExperimentalStdlibApi::class)\n     fun ensureCapacity(minimumCapacity: Int)\n\n     /**\n     *
Returns the index within this string builder of the first occurrence of the specified [string].\n     * \n     * Returns `-1`

```

```

if the specified [string] does not occur in this string builder.\n *^n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n fun indexOf(string: String): Int\n\n /**\n * Returns the
index within this string builder of the first occurrence of the specified [string],\n * starting at the specified
[startIndex].\n *^n * Returns -1` if the specified [string] does not occur in this string builder starting at the
specified [startIndex].\n *^n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n
fun indexOf(string: String, startIndex: Int): Int\n\n /**\n * Returns the index within this string builder of the last
occurrence of the specified [string].\n * The last occurrence of empty string `""` is considered to be at the index
equal to `this.length`.\n *^n * Returns -1` if the specified [string] does not occur in this string builder.\n *^n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun lastIndexOf(string: String):
Int\n\n /**\n * Returns the index within this string builder of the last occurrence of the specified [string],\n *
starting from the specified [startIndex] toward the beginning.\n *^n * Returns -1` if the specified [string] does
not occur in this string builder starting at the specified [startIndex].\n *^n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n fun lastIndexOf(string: String, startIndex: Int): Int\n\n
/**\n * Inserts the string representation of the specified boolean [value] into this string builder at the specified
[index] and returns this instance.\n *^n * The overall effect is exactly as if the [value] were converted to a string
by the `value.toString()` method,\n * and then that string was inserted into this string builder at the specified
[index].\n *^n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length of
this string builder.\n *^n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun
insert(index: Int, value: Boolean): StringBuilder\n\n /**\n * Inserts the specified character [value] into this
string builder at the specified [index] and returns this instance.\n *^n * @throws IndexOutOfBoundsException
if [index] is less than zero or greater than the length of this string builder.\n *^n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value: Char): StringBuilder\n\n /**\n
* Inserts characters in the specified character array [value] into this string builder at the specified [index] and
returns this instance.\n *^n * The inserted characters go in same order as in the [value] character array, starting
at [index].\n *^n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the length
of this string builder.\n *^n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n
fun insert(index: Int, value: CharArray): StringBuilder\n\n /**\n * Inserts characters in the specified character
sequence [value] into this string builder at the specified [index] and returns this instance.\n *^n * The inserted
characters go in the same order as in the [value] character sequence, starting at [index].\n *^n * @param index
the position in this string builder to insert at.\n * @param value the character sequence from which characters are
inserted. If [value] is `null`, then the four characters `"\u0000\u0000\u0000\u0000"` are inserted.\n *^n * @throws
IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n *^n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value:
CharSequence?): StringBuilder\n\n /**\n * Inserts the string representation of the specified object [value] into
this string builder at the specified [index] and returns this instance.\n *^n * The overall effect is exactly as if
the [value] were converted to a string by the `value.toString()` method,\n * and then that string was inserted into
this string builder at the specified [index].\n *^n * @throws IndexOutOfBoundsException if [index] is less than
zero or greater than the length of this string builder.\n *^n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value: Any?): StringBuilder\n\n /**\n
* Inserts the string [value] into this string builder at the specified [index] and returns this instance.\n *^n * If
[value] is `null`, then the four characters `"\u0000\u0000\u0000\u0000"` are inserted.\n *^n * @throws
IndexOutOfBoundsException if [index] is less than zero or greater than the length of this string builder.\n *^n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun insert(index: Int, value: String?):
StringBuilder\n\n /**\n * Sets the length of this string builder to the specified [newLength].\n *^n * If the
[newLength] is less than the current length, it is changed to the specified [newLength].\n * Otherwise, null
characters `'\u0000'` are appended to this string builder until its length is less than the [newLength].\n *^n *
Note that in Kotlin/JS [set] operator function has non-constant execution time complexity.\n * Therefore, increasing
length of this string builder and then updating each character by index may slow down your program.\n *^n * @throws

```

```

IndexOutOfBoundsException or [IllegalArgumentException] if [newLength] is less than zero.\n    *\n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun setLength(newLength:
Int)\n\n /**\n * Returns a new [String] that contains characters in this string builder at [startIndex] (inclusive)
and up to the [length] (exclusive).\n * \n * @throws IndexOutOfBoundsException if [startIndex] is less than
zero or greater than the length of this string builder.\n * \n @SinceKotlin("1.4")\n
@WasExperimental(ExperimentalStdlibApi::class)\n fun substring(startIndex: Int): String\n\n /**\n * Returns
a new [String] that contains characters in this string builder at [startIndex] (inclusive) and up to the [endIndex]
(exclusive).\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex]
or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n * \n
@SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n fun substring(startIndex: Int,
endIndex: Int): String\n\n /**\n * Attempts to reduce storage used for this string builder.\n * \n * If the
backing storage of this string builder is larger than necessary to hold its current contents,\n * then it may be
resized to become more space efficient.\n * Calling this method may, but is not required to, affect the value of the
[capacity] property.\n * \n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n
fun trimToSize()\n}\n\n/**\n * Clears the content of this string builder making it empty and returns this instance.\n
*\n * @sample samples.text.Strings.clearStringBuilder\n * \n @SinceKotlin("1.3")\n\npublic expect fun
StringBuilder.clear(): StringBuilder\n\n/**\n * Sets the character at the specified [index] to the specified [value].\n
*\n * @throws IndexOutOfBoundsException if [index] is out of bounds of this string builder.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n\npublic expect operator fun
StringBuilder.set(index: Int, value: Char)\n\n/**\n * Replaces characters in the specified range of this string builder
with characters in the specified string [value] and returns this instance.\n * \n * @param startIndex the beginning
(inclusive) of the range to replace.\n * @param endIndex the end (exclusive) of the range to replace.\n * @param
value the string to replace with.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] if
[startIndex] is less than zero, greater than the length of this string builder, or `startIndex > endIndex`.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n\npublic expect fun
StringBuilder.setRange(startIndex: Int, endIndex: Int, value: String): StringBuilder\n\n/**\n * Removes the
character at the specified [index] from this string builder and returns this instance.\n * \n * If the `Char` at the
specified [index] is part of a supplementary code point, this method does not remove the entire supplementary
character.\n * \n * @param index the index of `Char` to remove.\n * \n * @throws IndexOutOfBoundsException if
[index] is out of bounds of this string builder.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n\npublic expect fun
StringBuilder.deleteAt(index: Int): StringBuilder\n\n/**\n * Removes characters in the specified range from this
string builder and returns this instance.\n * \n * @param startIndex the beginning (inclusive) of the range to
remove.\n * @param endIndex the end (exclusive) of the range to remove.\n * \n * @throws
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] is out of range of this string builder
indices or when `startIndex > endIndex`.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n\npublic expect fun
StringBuilder.deleteRange(startIndex: Int, endIndex: Int): StringBuilder\n\n/**\n * Copies characters from this
string builder into the [destination] character array.\n * \n * @param destination the array to copy to.\n * @param
destinationOffset the position in the array to copy to, 0 by default.\n * @param startIndex the beginning (inclusive)
of the range to copy, 0 by default.\n * @param endIndex the end (exclusive) of the range to copy, length of this
string builder by default.\n * \n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when
[startIndex] or [endIndex] is out of range of this string builder indices or when `startIndex > endIndex`.\n *
@throws IndexOutOfBoundsException when the subrange doesn't fit into the [destination] array starting at the
specified [destinationOffset],\n * or when that index is out of the [destination] array indices range.\n
*\n @SinceKotlin("1.4")\n @WasExperimental(ExperimentalStdlibApi::class)\n\npublic expect fun
StringBuilder.toCharArray(destination: CharArray, destinationOffset: Int = 0, startIndex: Int = 0, endIndex: Int =
this.length)\n\n/**\n * Appends characters in a subarray of the specified character array [value] to this string builder

```

and returns this instance.  
\* Characters are appended in order, starting at specified [startIndex].  
\* @param value the array from which characters are appended.  
\* @param startIndex the beginning (inclusive) of the subarray to append.  
\* @param endIndex the end (exclusive) of the subarray to append.  
\* @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when `startIndex > endIndex`.

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun  
StringBuilder.appendRange(value: CharArray, startIndex: Int, endIndex: Int): StringBuilder\n\n/**\n * Appends a  
subsequence of the specified character sequence [value] to this string builder and returns this instance.  
*\n * @param value the character sequence from which a subsequence is appended.  
*\n * @param startIndex the beginning  
(inclusive) of the subsequence to append.  
*\n * @param endIndex the end (exclusive) of the subsequence to append.  
*\n * @throws IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out  
of range of the [value] character sequence indices or when `startIndex > endIndex`.
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun  
StringBuilder.appendRange(value: CharSequence, startIndex: Int, endIndex: Int): StringBuilder\n\n/**\n * Inserts  
characters in a subarray of the specified character array [value] into this string builder at the specified [index] and  
returns this instance.  
*\n * The inserted characters go in same order as in the [value] array, starting at [index].  
*\n * @param index the position in this string builder to insert at.  
*\n * @param value the array from which characters  
are inserted.  
*\n * @param startIndex the beginning (inclusive) of the subarray to insert.  
*\n * @param endIndex the  
end (exclusive) of the subarray to insert.  
*\n * @throws IndexOutOfBoundsException or  
[IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the [value] array indices or when  
`startIndex > endIndex`.  
*\n * @throws IndexOutOfBoundsException if [index] is less than zero or greater than the  
length of this string builder.
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun  
StringBuilder.insertRange(index: Int, value: CharArray, startIndex: Int, endIndex: Int): StringBuilder\n\n/**\n * Inserts characters in a subsequence of the specified character sequence [value] into this string builder at the specified  
[index] and returns this instance.  
*\n * The inserted characters go in the same order as in the [value] character  
sequence, starting at [index].  
*\n * @param index the position in this string builder to insert at.  
*\n * @param value  
the character sequence from which a subsequence is inserted.  
*\n * @param startIndex the beginning (inclusive) of the  
subsequence to insert.  
*\n * @param endIndex the end (exclusive) of the subsequence to insert.  
*\n * @throws  
IndexOutOfBoundsException or [IllegalArgumentException] when [startIndex] or [endIndex] is out of range of the  
[value] character sequence indices or when `startIndex > endIndex`.  
*\n * @throws IndexOutOfBoundsException if  
[index] is less than zero or greater than the length of this string builder.
```

```
*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun  
StringBuilder.insertRange(index: Int, value: CharSequence, startIndex: Int, endIndex: Int):  
StringBuilder\n\n@Suppress("EXTENSION_SHADOWED_BY_MEMBER")\n@Deprecated("Use  
append(value: Any?) instead", ReplaceWith("append(value = obj)"),  
DeprecationLevel.WARNING)\n@kotlin.internal.InlineOnly\npublic inline fun StringBuilder.append(obj: Any?):  
StringBuilder = this.append(obj)\n\n/**\n * Builds new string by populating newly created [StringBuilder] using  
provided [builderAction]  
*\n * and then converting it to [String].  
*\n * @kotlin.internal.InlineOnly\npublic inline fun  
buildString(builderAction: String Builder.() -> Unit): String {\n    contract { callsInPlace(builderAction,  
InvocationKind.EXACTLY_ONCE) }\n    return StringBuilder().apply(builderAction).toString()\n}\n\n/**\n * Builds new string by populating newly created [StringBuilder] initialized with the given [capacity]  
*\n * using  
provided [builderAction] and then converting it to [String].
```

```
*\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun buildString(capacity: Int, builderAction:  
String Builder.() -> Unit): String {\n    contract { callsInPlace(builderAction, InvocationKind.EXACTLY_ONCE)  
}\n    return StringBuilder(capacity).apply(builderAction).toString()\n}\n\n/**\n * Appends all arguments to the  
given String Builder.  
*\n * @public fun StringBuilder.append(vararg value: String?): String Builder {\n    for (item in  
value)\n        append(item)\n    return this\n}\n\n/**\n * Appends all arguments to the given String Builder.
```

```

*public fun StringBuilder.append(vararg value: Any?): StringBuilder {
    for (item in value)
        append(item)
    return this
}

/** Appends a line feed character ('\n') to this StringBuilder.
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun StringBuilder.appendLine():
    StringBuilder = append("\n")

/** Appends [value] to this [StringBuilder], followed by a line feed character
 ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun StringBuilder.appendLine(value:
    CharSequence?): StringBuilder = append(value).appendLine()

/** Appends [value] to this [StringBuilder],
 followed by a line feed character ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun
    StringBuilder.appendLine(value: String?): StringBuilder = append(value).appendLine()

/** Appends [value] to
 this [StringBuilder], followed by a line feed character ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun StringBuilder.appendLine(value: Any?):
    StringBuilder = append(value).appendLine()

/** Appends [value] to this [StringBuilder], followed by a line feed
 character ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun
    StringBuilder.appendLine(value: CharArray): StringBuilder = append(value).appendLine()

/** Appends [value]
 to this [StringBuilder], followed by a line feed character ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun StringBuilder.appendLine(value: Char):
    StringBuilder = append(value).appendLine()

/** Appends [value] to this [StringBuilder], followed by a line feed
 character ('\n').
 */
@SinceKotlin("1.4")@kotlin.internal.InlineOnly
public inline fun
    StringBuilder.appendLine(value: Boolean): StringBuilder = append(value).appendLine()

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 Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package kotlin.text
import
    kotlin.js.RegExp
@kotlin.internal.InlineOnly
internal actual inline fun String.nativeIndexOf(ch: Char,
    fromIndex: Int): Int = nativeIndexOf(ch.toString(), fromIndex)
@kotlin.internal.InlineOnly
internal actual
    inline fun String.nativeLastIndexOf(ch: Char, fromIndex: Int): Int = nativeLastIndexOf(ch.toString(),
    fromIndex)

/** Returns `true` if this string starts with the specified prefix.
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
    String.startsWith(prefix: String, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase)
        return
            nativeStartsWith(prefix, 0)
    else
        return regionMatches(0, prefix, 0, prefix.length, ignoreCase)
}

/** Returns `true` if a substring of this string starting at the specified offset [startIndex] starts with the specified prefix.
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
    String.startsWith(prefix: String, startIndex: Int, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase)
        return nativeStartsWith(prefix, startIndex)
    else
        return regionMatches(startIndex, prefix, 0, prefix.length,
        ignoreCase)
}

/** Returns `true` if this string ends with the specified suffix.
 */
@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")
public actual fun
    String.endsWith(suffix: String, ignoreCase: Boolean = false): Boolean {
    if (!ignoreCase)
        return
            nativeEndsWith(suffix)
    else
        return regionMatches(length - suffix.length, suffix, 0, suffix.length,
        ignoreCase)
}

@Deprecated("Use Regex.matches() instead",
    ReplaceWith("regex.toRegex().matches(this)"))
@DeprecatedSinceKotlin(warningSince = "1.6")
public fun
    String.matches(regex: String): Boolean {
    @Suppress("DEPRECATION")
    val result = this.match(regex)
    return result != null && result.size != 0
}

/** Returns `true` if this string is empty or consists solely of
 whitespace characters.
 */
@sample samples.text.Strings.stringIsBlank
public actual fun
    CharSequence.isBlank(): Boolean = length == 0 || indices.all { this[it].isWhitespace() }

/** Returns `true` if
 this string is equal to [other], optionally ignoring character case.
 */
@sample samples.text.Strings.stringIsBlank
public actual fun
    CharSequence.isEqual(other: CharSequence, ignoreCase: Boolean = false): Boolean {
    if (ignoreCase)
        return this.equals(other, ignoreCase)
    else
        return this.equals(other)
}

/** Returns `true` if
 this string is equal to [other], optionally ignoring character case.
 */
@sample samples.text.Strings.stringIsBlank
public actual fun
    String?.equals(other: String?, ignoreCase: Boolean = false): Boolean {
    if (this == null) return other == null
    if (other == null) return false
    if (!ignoreCase) return this == other
    if (this.length != other.length) return
}

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false\n\n for (index in 0 until this.length) {\n    val thisChar = this[index]\n    val otherChar = other[index]\n    if (!thisChar.equals(otherChar, ignoreCase)) {\n        return false\n    }\n}\n\n return
true\n}\n\n\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic actual fun
CharSequence.regionMatches(thisOffset: Int, other: CharSequence, otherOffset: Int, length: Int, ignoreCase:
Boolean = false): Boolean =\n    regionMatchesImpl(thisOffset, other, otherOffset, length, ignoreCase)\n\n\n/**\n * Returns a copy of this string having its first letter titlecased using the rules of the default locale,\n * or the original
string if it's empty or already starts with a title case letter.\n * *\n * The title case of a character is usually the same as
its upper case with several exceptions.\n * *\n * The particular list of characters with the special title case form depends
on the underlying platform.\n * *\n * @sample samples.text.Strings.capitalize\n * *\n *\n @Deprecated("Use
replaceFirstChar instead.", ReplaceWith("replaceFirstChar { if (it.isLowerCase()) it.titlecase() else it.toString()
}"))\n\n@DeprecatedSinceKotlin(warningSince = "1.5")\n\npublic actual fun String.capitalize(): String {\n    return if
(isNotEmpty()) substring(0, 1).uppercase() + substring(1) else this\n}\n\n\n/**\n * Returns a copy of this string having
its first letter lowercased using the rules of the default locale,\n * or the original string if it's empty or already starts
with a lower case letter.\n * *\n * @sample samples.text.Strings.decapitalize\n * *\n *\n @Deprecated("Use
replaceFirstChar instead.", ReplaceWith("replaceFirstChar { it.lowercase()
}"))\n\n@DeprecatedSinceKotlin(warningSince = "1.5")\n\npublic actual fun String.decapitalize(): String {\n    return
if (isNotEmpty()) substring(0, 1).lowercase() + substring(1) else this\n}\n\n\n/**\n * Returns a string containing this
char sequence repeated [n] times.\n * *\n * @throws [IllegalArgumentException] when n < 0.\n * *\n * @sample
samples.text.Strings.repeat\n * *\n *\n\npublic actual fun CharSequence.repeat(n: Int): String {\n    require(n >= 0) {\n
"Count 'n' must be non-negative, but was $n." }\n    return when (n) {\n        0 -> ""\n        1 -> this.toString()\n
else -> {\n            var result = ""\n            if (!isEmpty()) {\n                var s = this.toString()\n                var count =
n\n                while (true) {\n                    if ((count and 1) == 1) {\n                        result += s\n                    }\n
                    count = count ushr 1\n                    if (count == 0) {\n                        break\n                    }\n
                    s +=\n                }\n            }\n            return result\n        }\n    }\n}\n\n\n/**\n * Returns a new string obtained by
replacing all occurrences of the [oldValue] substring in this string\n * with the specified [newValue] string.\n * *\n *
@sample samples.text.Strings.replace\n * *\n *\n\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic actual fun
String.replace(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =\n    nativeReplace(Regex(Regex.escape(oldValue)), if (ignoreCase) "gui" else "gu"),
Regex.nativeEscapeReplacement(newValue))\n\n\n/**\n * Returns a new string with all occurrences of [oldChar]
replaced with [newChar].\n * *\n * @sample samples.text.Strings.replace\n * *\n *\n\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic actual fun
String.replace(oldChar: Char, newChar: Char, ignoreCase: Boolean = false): String =\n    nativeReplace(Regex(Regex.escape(oldChar.toString())), if (ignoreCase) "gui" else "gu"),
newChar.toString())\n\n\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGUMENTS")\n\npublic actual
fun String.replaceFirst(oldValue: String, newValue: String, ignoreCase: Boolean = false): String =\n    nativeReplace(Regex(Regex.escape(oldValue)), if (ignoreCase) "ui" else "u"),
Regex.nativeEscapeReplacement(newValue))\n\n\n@Suppress("ACTUAL_FUNCTION_WITH_DEFAULT_ARGU
MENTS")\n\npublic actual fun String.replaceFirst(oldChar: Char, newChar: Char, ignoreCase: Boolean = false):
String =\n    nativeReplace(Regex(Regex.escape(oldChar.toString())), if (ignoreCase) "ui" else "u"),
newChar.toString())\n\n\n/**\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n * *\n *\n\npackage kotlin.text\n\n\n/**\n * Returns the negative [size] if [throwOnMalformed] is
false, throws [CharacterCodingException] otherwise. *\n\nprivate fun malformed(size: Int, index: Int,
throwOnMalformed: Boolean): Int {\n    if (throwOnMalformed) throw CharacterCodingException("Malformed
sequence starting at ${index - 1}")\n    return -size\n}\n\n\n/**\n * Returns code point corresponding to UTF-16
surrogate pair,\n * where the first of the pair is the [high] and the second is in the [string] at the [index].\n * Returns
zero if the pair is malformed and [throwOnMalformed] is false.\n * *\n * @throws CharacterCodingException if the

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pair is malformed and [throwOnMalformed] is true.\n */\nprivate fun codePointFromSurrogate(string: String, high:
Int, index: Int, endIndex: Int, throwOnMalformed: Boolean): Int {\n    if (high !in 0xD800..0xDBFF || index >=
endIndex) {\n        return malformed(0, index, throwOnMalformed)\n    }\n    val low = string[index].code\n    if
(low !in 0xDC00..0xDFFF) {\n        return malformed(0, index, throwOnMalformed)\n    }\n    return 0x10000 +
((high and 0x3FF) shl 10) or (low and 0x3FF)\n}\n\n/**\n * Returns code point corresponding to UTF-8 sequence of
two bytes,\n * where the first byte of the sequence is the [byte1] and the second byte is in the [bytes] array at the
[index].\n * Returns zero if the sequence is malformed and [throwOnMalformed] is false.\n * @throws
CharacterCodingException if the sequence of two bytes is malformed and [throwOnMalformed] is true.\n
*/\nprivate fun codePointFrom2(bytes: ByteArray, byte1: Int, index: Int, endIndex: Int, throwOnMalformed:
Boolean): Int {\n    if (byte1 and 0x1E == 0 || index >= endIndex) {\n        return malformed(0, index,
throwOnMalformed)\n    }\n    val byte2 = bytes[index].toInt()\n    if (byte2 and 0xC0 != 0x80) {\n        return
malformed(0, index, throwOnMalformed)\n    }\n    return (byte1 shl 6) xor byte2 xor 0xF80\n}\n\n/**\n * Returns
code point corresponding to UTF-8 sequence of three bytes,\n * where the first byte of the sequence is the [byte1]
and the others are in the [bytes] array starting from the [index].\n * Returns a non-positive value indicating number
of bytes from [bytes] included in malformed sequence\n * if the sequence is malformed and [throwOnMalformed] is
false.\n * @throws CharacterCodingException if the sequence of three bytes is malformed and
[throwOnMalformed] is true.\n */\nprivate fun codePointFrom3(bytes: ByteArray, byte1: Int, index: Int, endIndex:
Int, throwOnMalformed: Boolean): Int {\n    if (index >= endIndex) {\n        return malformed(0, index,
throwOnMalformed)\n    }\n    val byte2 = bytes[index].toInt()\n    if (byte1 and 0xF == 0) {\n        if (byte2 and
0xE0 != 0xA0) {\n            // Non-shortest form\n            return malformed(0, index, throwOnMalformed)\n        }\n
    } else if (byte1 and 0xF == 0xD) {\n        if (byte2 and 0xE0 != 0x80) {\n            // Surrogate code point\n
return malformed(0, index, throwOnMalformed)\n        }\n    } else if (byte2 and 0xC0 != 0x80) {\n        return
malformed(0, index, throwOnMalformed)\n    }\n    if (index + 1 == endIndex) {\n        return malformed(1, index,
throwOnMalformed)\n    }\n    val byte3 = bytes[index + 1].toInt()\n    if (byte3 and 0xC0 != 0x80) {\n        return
malformed(1, index, throwOnMalformed)\n    }\n    return (byte1 shl 12) xor (byte2 shl 6) xor byte3 xor -
0x1E080\n}\n\n/**\n * Returns code point corresponding to UTF-8 sequence of four bytes,\n * where the first byte
of the sequence is the [byte1] and the others are in the [bytes] array starting from the [index].\n * Returns a non-
positive value indicating number of bytes from [bytes] included in malformed sequence\n * if the sequence is
malformed and [throwOnMalformed] is false.\n * @throws CharacterCodingException if the sequence of four
bytes is malformed and [throwOnMalformed] is true.\n */\nprivate fun codePointFrom4(bytes: ByteArray, byte1:
Int, index: Int, endIndex: Int, throwOnMalformed: Boolean): Int {\n    if (index >= endIndex) {\n        malformed(0,
index, throwOnMalformed)\n    }\n    val byte2 = bytes[index].toInt()\n    if (byte1 and 0xF == 0x0) {\n        if
(byte2 and 0xF0 <= 0x80) {\n            // Non-shortest form\n            return malformed(0, index,
throwOnMalformed)\n        }\n    } else if (byte1 and 0xF == 0x4) {\n        if (byte2 and 0xF0 != 0x80) {\n            //
Out of Unicode code points domain (larger than U+10FFFF)\n            return malformed(0, index,
throwOnMalformed)\n        }\n    } else if (byte1 and 0xF > 0x4) {\n        return malformed(0, index,
throwOnMalformed)\n    } else if (byte2 and 0xC0 != 0x80) {\n        return malformed(0, index,
throwOnMalformed)\n    }\n    if (index + 1 == endIndex) {\n        return malformed(1, index,
throwOnMalformed)\n    }\n    val byte3 = bytes[index + 1].toInt()\n    if (byte3 and 0xC0 != 0x80) {\n        return
malformed(1, index, throwOnMalformed)\n    }\n    if (index + 2 == endIndex) {\n        return malformed(2, index,
throwOnMalformed)\n    }\n    val byte4 = bytes[index + 2].toInt()\n    if (byte4 and 0xC0 != 0x80) {\n        return
malformed(2, index, throwOnMalformed)\n    }\n    return (byte1 shl 18) xor (byte2 shl 12) xor (byte3 shl 6) xor
byte4 xor 0x381F80\n}\n\n/**\n * Maximum number of bytes needed to encode a single char.\n * Code points in
`0..0x7F` are encoded in a single byte.\n * Code points in `0x80..0x7FF` are encoded in two bytes.\n * Code points
in `0x800..0xD7FF` or in `0xE000..0xFFFF` are encoded in three bytes.\n * Surrogate code points in
`0xD800..0xDFFF` are not Unicode scalar values, therefore aren't encoded.\n * Code points in
`0x10000..0x10FFFF` are represented by a pair of surrogate `Char`s and are encoded in four bytes.\n */\nprivate
const val MAX_BYTES_PER_CHAR = 3\n\n/**\n * The byte sequence a malformed UTF-16 char sequence is

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replaced by.\n *\nprivate val REPLACEMENT_BYTE_SEQUENCE: ByteArray = byteArrayOf(0xEF.toByte(),
0xBF.toByte(), 0xBD.toByte())\n\n/**\n * Encodes the [string] using UTF-8 and returns the resulting [ByteArray].\n
*\n * @param string the string to encode.\n * @param startIndex the start offset (inclusive) of the substring to
encode.\n * @param endIndex the end offset (exclusive) of the substring to encode.\n * @param
throwOnMalformed whether to throw on malformed char sequence or replace by the
[REPLACEMENT_BYTE_SEQUENCE].\n *\n * @throws CharacterCodingException if the char sequence is
malformed and [throwOnMalformed] is true.\n *\ninternal fun encodeUtf8(string: String, startIndex: Int, endIndex:
Int, throwOnMalformed: Boolean): ByteArray {\n    require(startIndex >= 0 && endIndex <= string.length &&
startIndex <= endIndex)\n\n    val bytes = ByteArray((endIndex - startIndex) * MAX_BYTES_PER_CHAR)\n    var
byteIndex = 0\n    var charIndex = startIndex\n\n    while (charIndex < endIndex) {\n        val code =
string[charIndex++].code\n        when {\n            code < 0x80 ->{\n                bytes[byteIndex++] = code.toByte()\n
                code < 0x800 -> {\n                    bytes[byteIndex++] = ((code shr 6) or 0xC0).toByte()\n
                    bytes[byteIndex++] = ((code and 0x3F) or 0x80).toByte()\n                }\n                code < 0xD800 || code >= 0xE000 ->
{\n                    bytes[byteIndex++] = ((code shr 12) or 0xE0).toByte()\n                    bytes[byteIndex++] = (((code shr 6)
and 0x3F) or 0x80).toByte()\n                    bytes[byteIndex++] = ((code and 0x3F) or 0x80).toByte()\n                }\n
                else -> { // Surrogate char value\n                    val codePoint = codePointFromSurrogate(string, code, charIndex,
endIndex, throwOnMalformed)\n                    if (codePoint <= 0) {\n                        bytes[byteIndex++] =
REPLACEMENT_BYTE_SEQUENCE[0]\n                        bytes[byteIndex++] =
REPLACEMENT_BYTE_SEQUENCE[1]\n                        bytes[byteIndex++] =
REPLACEMENT_BYTE_SEQUENCE[2]\n                    } else {\n                        bytes[byteIndex++] = ((codePoint shr
18) or 0xF0).toByte()\n                        bytes[byteIndex++] = (((codePoint shr 12) and 0x3F) or 0x80).toByte()\n
                        bytes[byteIndex++] = (((codePoint shr 6) and 0x3F) or 0x80).toByte()\n                        bytes[byteIndex++] =
((codePoint and 0x3F) or 0x80).toByte()\n                        charIndex++\n                    }\n                }\n            }\n        }\n    }\n\n    return if (bytes.size == byteIndex) bytes else bytes.copyOf(byteIndex)\n}\n\n/**\n * The character a malformed
UTF-8 byte sequence is replaced by.\n *\nprivate const val REPLACEMENT_CHAR = "\uFFFF"\n\n/**\n *
Decodes the UTF-8 [bytes] array and returns the resulting [String].\n *\n * @param bytes the byte array to decode.\n
* @param startIndex the start offset (inclusive) of the array to be decoded.\n * @param endIndex the end offset
(exclusive) of the array to be encoded.\n * @param throwOnMalformed whether to throw on malformed byte
sequence or replace by the [REPLACEMENT_CHAR].\n *\n * @throws CharacterCodingException if the array is
malformed UTF-8 byte sequence and [throwOnMalformed] is true.\n *\ninternal fun decodeUtf8(bytes: ByteArray,
startIndex: Int, endIndex: Int, throwOnMalformed: Boolean): String {\n    require(startIndex >= 0 && endIndex <=
bytes.size && startIndex <= endIndex)\n\n    var byteIndex = startIndex\n    val stringBuilder = StringBuilder()\n\n    while (byteIndex < endIndex) {\n        val byte = bytes[byteIndex++].toInt()\n        when {\n            byte >= 0 ->{\n                stringBuilder.append(byte.toChar())\n                byte shr 5 == -2 -> {\n                    val code =
codePointFrom2(bytes, byte, byteIndex, endIndex, throwOnMalformed)\n                    if (code <= 0) {\n
                        stringBuilder.append(REPLACEMENT_CHAR)\n                        byteIndex += -code\n                    } else {\n
                        stringBuilder.append(code.toChar())\n                        byteIndex += 1\n                    }\n                }\n                byte shr 4 == -2 -
> {\n                    val code = codePointFrom3(bytes, byte, byteIndex, endIndex, throwOnMalformed)\n                    if
(code <= 0) {\n                        stringBuilder.append(REPLACEMENT_CHAR)\n                        byteIndex += -code\n
                    } else {\n                        stringBuilder.append(code.toChar())\n                        byteIndex += 2\n                    }\n                }\n            }\n            byte shr 3 == -2 -> {\n                val code = codePointFrom4(bytes, byte, byteIndex, endIndex,
throwOnMalformed)\n                if (code <= 0) {\n                    stringBuilder.append(REPLACEMENT_CHAR)\n
                    byteIndex += -code\n                } else {\n                    val high = (code - 0x10000) shr 10 or 0xD800\n
                    val low = (code and 0x3FF) or 0xDC00\n                    stringBuilder.append(high.toChar())\n
                    stringBuilder.append(low.toChar())\n                    byteIndex += 3\n                }\n            }\n            else -> {\n                malformed(0, byteIndex, throwOnMalformed)\n
                stringBuilder.append(REPLACEMENT_CHAR)\n            }\n        }\n    }\n\n    return stringBuilder.toString()\n}\n\n"/**\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be

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durationAssertionsEnabled: Boolean get() = true\n\ninternal actual fun formatToExactDecimals(value: Double,
decimals: Int): String {\n    val rounded = if (decimals == 0) {\n        value\n    } else {\n        val pow =
10.0.pow(decimals)\n        JsMath.round(abs(value) * pow) / pow * sign(value)\n    }\n    return if (abs(rounded) <
1e21) {\n        // toFixed switches to scientific format after 1e21\n
rounded.asDynamic().toFixed(decimals).unsafeCast<String>()\n    } else {\n        // toPrecision outputs the specified
number of digits, but only for positive numbers\n        val positive = abs(rounded)\n        val positiveString =
positive.asDynamic().toPrecision(ceil(log10(positive)) + decimals).unsafeCast<String>()\n        if (rounded < 0) \"-
$positiveString\" else positiveString\n    }\n}\n\ninternal actual fun formatUpToDecimals(value: Double, decimals:
Int): String {\n    return value.asDynamic().toLocaleString(\"en-us\", json(\"maximumFractionDigits\" to
decimals)).unsafeCast<String>()\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage
kotlin.time\n\n@SinceKotlin(\"1.6\")\n@WasExperimental(ExperimentalTime::class)\npublic actual enum class
DurationUnit(internal val scale: Double) {\n    /**\n     * Time unit representing one nanosecond, which is 1/1000 of
a microsecond.\n     */\n    NANOSECONDS(1e0),\n    /**\n     * Time unit representing one microsecond, which is
1/1000 of a millisecond.\n     */\n    MICROSECONDS(1e3),\n    /**\n     * Time unit representing one millisecond,
which is 1/1000 of a second.\n     */\n    MILLISECONDS(1e6),\n    /**\n     * Time unit representing one second.\n
*/\n    SECONDS(1e9),\n    /**\n     * Time unit representing one minute.\n     */\n    MINUTES(60e9),\n    /**\n
     * Time unit representing one hour.\n     */\n    HOURS(3600e9),\n    /**\n     * Time unit representing one day,
which is always equal to 24 hours.\n     */\n    DAYS(86400e9);\n}\n\n@SinceKotlin(\"1.3\")\ninternal actual fun
convertDurationUnit(value: Double, sourceUnit: DurationUnit, targetUnit: DurationUnit): Double {\n    val
sourceCompareTarget = sourceUnit.scale.compareTo(targetUnit.scale)\n    return when {\n
sourceCompareTarget > 0 -> value * (sourceUnit.scale / targetUnit.scale)\n        sourceCompareTarget < 0 -> value /
(targetUnit.scale / sourceUnit.scale)\n        else -> value\n    }\n}\n\n@SinceKotlin(\"1.5\")\ninternal actual fun
convertDurationUnitOverflow(value: Long, sourceUnit: DurationUnit, targetUnit: DurationUnit): Long {\n    val
sourceCompareTarget = sourceUnit.scale.compareTo(targetUnit.scale)\n    return when {\n
sourceCompareTarget > 0 -> value * (sourceUnit.scale / targetUnit.scale).toLong()\n        sourceCompareTarget < 0
-> value / (targetUnit.scale / sourceUnit.scale).toLong()\n        else -> value\n    }\n}\n\n@SinceKotlin(\"1.5\")\ninternal actual fun convertDurationUnit(value: Long, sourceUnit: DurationUnit,
targetUnit: DurationUnit): Long {\n    val sourceCompareTarget = sourceUnit.scale.compareTo(targetUnit.scale)\n
return when {\n        sourceCompareTarget > 0 -> {\n            val scale = (sourceUnit.scale /
targetUnit.scale).toLong()\n            val result = value * scale\n            when {\n                result / scale == value ->
result\n                value > 0 -> Long.MAX_VALUE\n                else -> Long.MIN_VALUE\n            }\n        }\n
sourceCompareTarget < 0 -> value / (targetUnit.scale / sourceUnit.scale).toLong()\n        else -> value\n    }\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.time\n\nimport org.w3c.performance.GlobalPerformance\nimport
org.w3c.performance.Performance\n\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\ninternal actual object
MonotonicTimeSource : TimeSource {\n    private val actualSource: TimeSource = run {\n        val isNode:
Boolean = js(\"typeof process !== 'undefined' && process.versions && !!process.versions.node\")\n        if
(isNode)\n            HrTimeSource(js(\"process\").unsafeCast<Process>())\n        else\n
js(\"self\").unsafeCast<GlobalPerformance?>()?.performance?.let(::PerformanceTimeSource)\n        ?:
DateNowTimeSource\n    }\n    override fun markNow(): TimeMark = actualSource.markNow()\n}\n\ninternal
external interface Process {\n    fun hrtime(time: Array<Double> = definedExternally):
Array<Double>\n}\n\n@SinceKotlin(\"1.3\")\n@ExperimentalTime\ninternal class HrTimeSource(val process:
Process) : TimeSource {\n    override fun markNow(): TimeMark = object : TimeMark() {\n        val startedAt =
process.hrtime()\n        override fun elapsedNow(): Duration =\n            process.hrtime(startedAt).let { (seconds,
nanos) -> seconds.toDuration(DurationUnit.SECONDS) + nanos.toDuration(DurationUnit.NANOSECONDS) }\n    }\n}

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nodeType == Node.ELEMENT_NODE\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.dom\n\nimport org.w3c.dom.*\n\n/** Removes all the children
from this node. *\n@SinceKotlin("1.4")\npublic fun Node.clear() {\n    while (hasChildNodes()) {\n
removeChild(firstChild!)\n    }\n}\n\n/** Creates text node and append it to the element.\n */\n * @return this
element\n */\n@SinceKotlin("1.4")\nfun Element.appendText(text: String): Element {\n
appendChild(ownerDocument!!.createTextNode(text))\n    return this\n}\n", "/*\n * Copyright 2010-2019 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage org.w3c.dom\n\n@Deprecated("Use
UnionMessagePortOrWindowProxy instead.", ReplaceWith("UnionMessagePortOrWindowProxy"))\ntypealias
UnionMessagePortOrWindow = UnionMessagePortOrWindowProxy\n\n@Deprecated("Use `as` instead.",
ReplaceWith("`as`"))\nvar HTMLLinkElement.as_\n    get() = `as`\n    set(value) {\n        `as` = value\n
}\n\n@Deprecated("Use `is` instead.", ReplaceWith("`is`"))\nvar ElementCreationOptions.is_\n    get() = `is`\n
set(value) {\n        `is` = value\n    }", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See
github.com/kotlin/dukat for details\n\npackage org.khronos.webgl\n\nimport kotlin.js.*\nimport
org.w3c.dom.*\nimport org.w3c.dom.events.*\n\npublic external interface WebGLContextAttributes {\n    var
alpha: Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var depth:
Boolean? /* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var stencil: Boolean?
/* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var antialias: Boolean? /* =
true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var premultipliedAlpha: Boolean?
/* = true */\n        get() = definedExternally\n        set(value) = definedExternally\n    var preserveDrawingBuffer:
Boolean? /* = false */\n        get() = definedExternally\n        set(value) = definedExternally\n    var
preferLowPowerToHighPerformance: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n    var failIfMajorPerformanceCaveat: Boolean? /* = false */\n        get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun WebGLContextAttributes(alpha:
Boolean? = true, depth: Boolean? = true, stencil: Boolean? = false, antialias: Boolean? = true, premultipliedAlpha:
Boolean? = true, preserveDrawingBuffer: Boolean? = false, preferLowPowerToHighPerformance: Boolean? = false,
failIfMajorPerformanceCaveat: Boolean? = false): WebGLContextAttributes {\n    val o = js("{}")\n
o["alpha"] = alpha\n    o["depth"] = depth\n    o["stencil"] = stencil\n    o["antialias"] = antialias\n
o["premultipliedAlpha"] = premultipliedAlpha\n    o["preserveDrawingBuffer"] = preserveDrawingBuffer\n
o["preferLowPowerToHighPerformance"] = preferLowPowerToHighPerformance\n
o["failIfMajorPerformanceCaveat"] = failIfMajorPerformanceCaveat\n    return o\n}\n\npublic external abstract
class WebGLObject\n\n/** Exposes the JavaScript
[WebGLBuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLBuffer) to Kotlin\n */\n\npublic external
abstract class WebGLBuffer : WebGLObject\n\n/** Exposes the JavaScript
[WebGLFramebuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLFramebuffer) to Kotlin\n */\n\npublic
external abstract class WebGLFramebuffer : WebGLObject\n\n/** Exposes the JavaScript
[WebGLProgram](https://developer.mozilla.org/en/docs/Web/API/WebGLProgram) to Kotlin\n */\n\npublic external
abstract class WebGLProgram : WebGLObject\n\n/** Exposes the JavaScript
[WebGLRenderbuffer](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderbuffer) to Kotlin\n */\n\npublic
external abstract class WebGLRenderbuffer : WebGLObject\n\n/** Exposes the JavaScript
[WebGLShader](https://developer.mozilla.org/en/docs/Web/API/WebGLShader) to Kotlin\n */\n\npublic external
abstract class WebGLShader : WebGLObject\n\n/** Exposes the JavaScript
[WebGLTexture](https://developer.mozilla.org/en/docs/Web/API/WebGLTexture) to Kotlin\n */\n\npublic external
abstract class WebGLTexture : WebGLObject\n\n/** Exposes the JavaScript

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[WebGLUniformLocation](https://developer.mozilla.org/en/docs/Web/API/WebGLUniformLocation) to Kotlin  
`*\npublic external abstract class WebGLUniformLocation\n\n/**\n * Exposes the JavaScript`

[WebGLActiveInfo](https://developer.mozilla.org/en/docs/Web/API/WebGLActiveInfo) to Kotlin  
`*\npublic external abstract class WebGLActiveInfo {\n\n open val size: Int\n\n open val type: Int\n\n open val name: String\n}\n\n/**\n * Exposes the JavaScript`

[WebGLShaderPrecisionFormat](https://developer.mozilla.org/en/docs/Web/API/WebGLShaderPrecisionFormat) to Kotlin  
`*\npublic external abstract class WebGLShaderPrecisionFormat {\n\n open val rangeMin: Int\n\n open val rangeMax: Int\n\n open val precision: Int\n\n\n\n@Suppress(\\\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\\\")\npublic external interface WebGLRenderingContextBase {\n\n val canvas: HTMLCanvasElement\n\n val drawingBufferWidth: Int\n\n val drawingBufferHeight: Int\n\n fun getContextAttributes(): WebGLContextAttributes?\n\n fun isContextLost(): Boolean\n\n fun getSupportedExtensions(): Array<String>?\n\n fun getExtension(name: String): dynamic\n\n fun activeTexture(texture: Int)\n\n fun attachShader(program: WebGLProgram?, shader: WebGLShader?)\n\n fun bindAttribLocation(program: WebGLProgram?, index: Int, name: String)\n\n fun bindBuffer(target: Int, buffer: WebGLBuffer?)\n\n fun bindFramebuffer(target: Int, framebuffer: WebGLFramebuffer?)\n\n fun bindRenderbuffer(target: Int, renderbuffer: WebGLRenderbuffer?)\n\n fun bindTexture(target: Int, texture: WebGLTexture?)\n\n fun blendColor(red: Float, green: Float, blue: Float, alpha: Float)\n\n fun blendEquation(mode: Int)\n\n fun blendEquationSeparate(modeRGB: Int, modeAlpha: Int)\n\n fun blendFunc(sfactor: Int, dfactor: Int)\n\n fun blendFuncSeparate(srcRGB: Int, dstRGB: Int, srcAlpha: Int, dstAlpha: Int)\n\n fun bufferData(target: Int, size: Int, usage: Int)\n\n fun bufferData(target: Int, data: BufferDataSource?, usage: Int)\n\n fun bufferSubData(target: Int, offset: Int, data: BufferDataSource?)\n\n fun checkFramebufferStatus(target: Int): Int\n\n fun clear(mask: Int)\n\n fun clearColor(red: Float, green: Float, blue: Float, alpha: Float)\n\n fun clearDepth(depth: Float)\n\n fun clearStencil(s: Int)\n\n fun colorMask(red: Boolean, green: Boolean, blue: Boolean, alpha: Boolean)\n\n fun compileShader(shader: WebGLShader?)\n\n fun compressedTexImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int, border: Int, data: ArrayBufferView)\n\n fun compressedTexSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, width: Int, height: Int, format: Int, data: ArrayBufferView)\n\n fun copyTexImage2D(target: Int, level: Int, internalformat: Int, x: Int, y: Int, width: Int, height: Int, border: Int)\n\n fun copyTexSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, x: Int, y: Int, width: Int, height: Int)\n\n fun createBuffer(): WebGLBuffer?\n\n fun createFramebuffer(): WebGLFramebuffer?\n\n fun createProgram(): WebGLProgram?\n\n fun createRenderbuffer(): WebGLRenderbuffer?\n\n fun createShader(type: Int): WebGLShader?\n\n fun createTexture(): WebGLTexture?\n\n fun cullFace(mode: Int)\n\n fun deleteBuffer(buffer: WebGLBuffer?)\n\n fun deleteFramebuffer(framebuffer: WebGLFramebuffer?)\n\n fun deleteProgram(program: WebGLProgram?)\n\n fun deleteRenderbuffer(renderbuffer: WebGLRenderbuffer?)\n\n fun deleteShader(shader: WebGLShader?)\n\n fun deleteTexture(texture: WebGLTexture?)\n\n fun depthFunc(func: Int)\n\n fun depthMask(flag: Boolean)\n\n fun depthRange(zNear: Float, zFar: Float)\n\n fun detachShader(program: WebGLProgram?, shader: WebGLShader?)\n\n fun disable(cap: Int)\n\n fun disableVertexAttribArray(index: Int)\n\n fun drawArrays(mode: Int, first: Int, count: Int)\n\n fun drawElements(mode: Int, count: Int, type: Int, offset: Int)\n\n fun enable(cap: Int)\n\n fun enableVertexAttribArray(index: Int)\n\n fun finish()\n\n fun flush()\n\n fun framebufferRenderbuffer(target: Int, attachment: Int, renderbuffertarget: Int, renderbuffer: WebGLRenderbuffer?)\n\n fun framebufferTexture2D(target: Int, attachment: Int, textarget: Int, texture: WebGLTexture?, level: Int)\n\n fun frontFace(mode: Int)\n\n fun generateMipmap(target: Int)\n\n fun getActiveAttrib(program: WebGLProgram?, index: Int): WebGLActiveInfo?\n\n fun getActiveUniform(program: WebGLProgram?, index: Int): WebGLActiveInfo?\n\n fun getAttachedShaders(program: WebGLProgram?): Array<WebGLShader>?\n\n fun getAttribLocation(program: WebGLProgram?, name: String): Int\n\n fun getBufferParameter(target: Int, pname: Int): Any?\n\n fun getParameter(pname: Int): Any?\n\n fun getError(): Int\n\n fun getFramebufferAttachmentParameter(target: Int, attachment: Int, pname: Int): Any?\n\n fun getProgramParameter(program: WebGLProgram?, pname: Int): Any?\n\n fun getProgramInfoLog(program: WebGLProgram?): String?\n\n fun getRenderbufferParameter(target: Int, pname:`

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Int): Any?\n fun getShaderParameter(shader: WebGLShader?, pname: Int): Any?\n fun
getShaderPrecisionFormat(shadertype: Int, precisiontype: Int): WebGLShaderPrecisionFormat?\n fun
getShaderInfoLog(shader: WebGLShader?): String?\n fun getShaderSource(shader: WebGLShader?): String?\n
fun getTexParameter(target: Int, pname: Int): Any?\n fun getUniform(program: WebGLProgram?, location:
WebGLUniformLocation?): Any?\n fun getUniformLocation(program: WebGLProgram?, name: String):
WebGLUniformLocation?\n fun getVertexAttrib(index: Int, pname: Int): Any?\n fun
getVertexAttribOffset(index: Int, pname: Int): Int\n fun hint(target: Int, mode: Int)\n fun isBuffer(buffer:
WebGLBuffer?): Boolean\n fun isEnabled(cap: Int): Boolean\n fun isFramebuffer(framebuffer:
WebGLFramebuffer?): Boolean\n fun isProgram(program: WebGLProgram?): Boolean\n fun
isRenderbuffer(renderbuffer: WebGLRenderbuffer?): Boolean\n fun isShader(shader: WebGLShader?): Boolean\n
fun isTexture(texture: WebGLTexture?): Boolean\n fun lineWidth(width: Float)\n fun linkProgram(program:
WebGLProgram?)\n fun pixelStorei(pname: Int, param: Int)\n fun polygonOffset(factor: Float, units: Float)\n
fun readPixels(x: Int, y: Int, width: Int, height: Int, format: Int, type: Int, pixels: ArrayBufferView?)\n fun
renderbufferStorage(target: Int, internalformat: Int, width: Int, height: Int)\n fun sampleCoverage(value: Float,
invert: Boolean)\n fun scissor(x: Int, y: Int, width: Int, height: Int)\n fun shaderSource(shader: WebGLShader?,
source: String)\n fun stencilFunc(func: Int, ref: Int, mask: Int)\n fun stencilFuncSeparate(face: Int, func: Int, ref:
Int, mask: Int)\n fun stencilMask(mask: Int)\n fun stencilMaskSeparate(face: Int, mask: Int)\n fun
stencilOp(fail: Int, zfail: Int, zpass: Int)\n fun stencilOpSeparate(face: Int, fail: Int, zfail: Int, zpass: Int)\n fun
texImage2D(target: Int, level: Int, internalformat: Int, width: Int, height: Int, border: Int, format: Int, type: Int, pixels:
ArrayBufferView?)\n fun texImage2D(target: Int, level: Int, internalformat: Int, format: Int, type: Int, source:
TexImageSource?)\n fun texParameterf(target: Int, pname: Int, param: Float)\n fun texParameteri(target: Int,
pname: Int, param: Int)\n fun texSubImage2D(target: Int, level: Int, xoffset: Int, yoffset: Int, width: Int, height: Int,
format: Int, type: Int, pixels: ArrayBufferView?)\n fun texSubImage2D(target: Int, level: Int, xoffset: Int, yoffset:
Int, format: Int, type: Int, source: TexImageSource?)\n fun uniform1f(location: WebGLUniformLocation?, x:
Float)\n fun uniform1fv(location: WebGLUniformLocation?, v: Float32Array)\n fun uniform1fv(location:
WebGLUniformLocation?, v: Array<Float>)\n fun uniform1i(location: WebGLUniformLocation?, x: Int)\n fun
uniform1iv(location: WebGLUniformLocation?, v: Int32Array)\n fun uniform1iv(location:
WebGLUniformLocation?, v: Array<Int>)\n fun uniform2f(location: WebGLUniformLocation?, x: Float, y:
Float)\n fun uniform2fv(location: WebGLUniformLocation?, v: Float32Array)\n fun uniform2fv(location:
WebGLUniformLocation?, v: Array<Float>)\n fun uniform2i(location: WebGLUniformLocation?, x: Int, y: Int)\n
fun uniform2iv(location: WebGLUniformLocation?, v: Int32Array)\n fun uniform2iv(location:
WebGLUniformLocation?, v: Array<Int>)\n fun uniform3f(location: WebGLUniformLocation?, x: Float, y: Float,
z: Float)\n fun uniform3fv(location: WebGLUniformLocation?, v: Float32Array)\n fun uniform3fv(location:
WebGLUniformLocation?, v: Array<Float>)\n fun uniform3i(location: WebGLUniformLocation?, x: Int, y: Int, z:
Int)\n fun uniform3iv(location: WebGLUniformLocation?, v: Int32Array)\n fun uniform3iv(location:
WebGLUniformLocation?, v: Array<Int>)\n fun uniform4f(location: WebGLUniformLocation?, x: Float, y: Float,
z: Float, w: Float)\n fun uniform4fv(location: WebGLUniformLocation?, v: Float32Array)\n fun
uniform4fv(location: WebGLUniformLocation?, v: Array<Float>)\n fun uniform4i(location:
WebGLUniformLocation?, x: Int, y: Int, z: Int, w: Int)\n fun uniform4iv(location: WebGLUniformLocation?, v:
Int32Array)\n fun uniform4iv(location: WebGLUniformLocation?, v: Array<Int>)\n fun
uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix2fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
uniformMatrix3fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix3fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Float32Array)\n fun
uniformMatrix4fv(location: WebGLUniformLocation?, transpose: Boolean, value: Array<Float>)\n fun
useProgram(program: WebGLProgram?)\n fun validateProgram(program: WebGLProgram?)\n fun
vertexAttrib1f(index: Int, x: Float)\n fun vertexAttrib1fv(index: Int, values: dynamic)\n fun

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vertexAttrib2f(index: Int, x: Float, y: Float)\n fun vertexAttrib2fv(index: Int, values: dynamic)\n fun
vertexAttrib3f(index: Int, x: Float, y: Float, z: Float)\n fun vertexAttrib3fv(index: Int, values: dynamic)\n fun
vertexAttrib4f(index: Int, x: Float, y: Float, z: Float, w: Float)\n fun vertexAttrib4fv(index: Int, values: dynamic)\n
fun vertexAttribPointer(index: Int, size: Int, type: Int, normalized: Boolean, stride: Int, offset: Int)\n fun
viewport(x: Int, y: Int, width: Int, height: Int)\n\n companion object {\n val DEPTH_BUFFER_BIT: Int\n
val STENCIL_BUFFER_BIT: Int\n val COLOR_BUFFER_BIT: Int\n val POINTS: Int\n val LINES:
Int\n val LINE_LOOP: Int\n val LINE_STRIP: Int\n val TRIANGLES: Int\n val
TRIANGLE_STRIP: Int\n val TRIANGLE_FAN: Int\n val ZERO: Int\n val ONE: Int\n val
SRC_COLOR: Int\n val ONE_MINUS_SRC_COLOR: Int\n val SRC_ALPHA: Int\n val
ONE_MINUS_SRC_ALPHA: Int\n val DST_ALPHA: Int\n val ONE_MINUS_DST_ALPHA: Int\n
val DST_COLOR: Int\n val ONE_MINUS_DST_COLOR: Int\n val SRC_ALPHA_SATURATE: Int\n
val FUNC_ADD: Int\n val BLEND_EQUATION: Int\n val BLEND_EQUATION_RGB: Int\n val
BLEND_EQUATION_ALPHA: Int\n val FUNC_SUBTRACT: Int\n val FUNC_REVERSE_SUBTRACT:
Int\n val BLEND_DST_RGB: Int\n val BLEND_SRC_RGB: Int\n val BLEND_DST_ALPHA: Int\n
val BLEND_SRC_ALPHA: Int\n val CONSTANT_COLOR: Int\n val
ONE_MINUS_CONSTANT_COLOR: Int\n val CONSTANT_ALPHA: Int\n val
ONE_MINUS_CONSTANT_ALPHA: Int\n val BLEND_COLOR: Int\n val ARRAY_BUFFER: Int\n
val ELEMENT_ARRAY_BUFFER: Int\n val ARRAY_BUFFER_BINDING: Int\n val
ELEMENT_ARRAY_BUFFER_BINDING: Int\n val STREAM_DRAW: Int\n val STATIC_DRAW: Int\n
val DYNAMIC_DRAW: Int\n val BUFFER_SIZE: Int\n val BUFFER_USAGE: Int\n val
CURRENT_VERTEX_ATTRIB: Int\n val FRONT: Int\n val BACK: Int\n val FRONT_AND_BACK:
Int\n val CULL_FACE: Int\n val BLEND: Int\n val DITHER: Int\n val STENCIL_TEST: Int\n
val DEPTH_TEST: Int\n val SCISSOR_TEST: Int\n val POLYGON_OFFSET_FILL: Int\n val
SAMPLE_ALPHA_TO_COVERAGE: Int\n val SAMPLE_COVERAGE: Int\n val NO_ERROR: Int\n
val INVALID_ENUM: Int\n val INVALID_VALUE: Int\n val INVALID_OPERATION: Int\n val
OUT_OF_MEMORY: Int\n val CW: Int\n val CCW: Int\n val LINE_WIDTH: Int\n val
ALIASED_POINT_SIZE_RANGE: Int\n val ALIASED_LINE_WIDTH_RANGE: Int\n val
CULL_FACE_MODE: Int\n val FRONT_FACE: Int\n val DEPTH_RANGE: Int\n val
DEPTH_WRITEMASK: Int\n val DEPTH_CLEAR_VALUE: Int\n val DEPTH_FUNC: Int\n val
STENCIL_CLEAR_VALUE: Int\n val STENCIL_FUNC: Int\n val STENCIL_FAIL: Int\n val
STENCIL_PASS_DEPTH_FAIL: Int\n val STENCIL_PASS_DEPTH_PASS: Int\n val STENCIL_REF:
Int\n val STENCIL_VALUE_MASK: Int\n val STENCIL_WRITEMASK: Int\n val
STENCIL_BACK_FUNC: Int\n val STENCIL_BACK_FAIL: Int\n val
STENCIL_BACK_PASS_DEPTH_FAIL: Int\n val STENCIL_BACK_PASS_DEPTH_PASS: Int\n val
STENCIL_BACK_REF: Int\n val STENCIL_BACK_VALUE_MASK: Int\n val
STENCIL_BACK_WRITEMASK: Int\n val VIEWPORT: Int\n val SCISSOR_BOX: Int\n val
COLOR_CLEAR_VALUE: Int\n val COLOR_WRITEMASK: Int\n val UNPACK_ALIGNMENT: Int\n
val PACK_ALIGNMENT: Int\n val MAX_TEXTURE_SIZE: Int\n val MAX_VIEWPORT_DIMS: Int\n
val SUBPIXEL_BITS: Int\n val RED_BITS: Int\n val GREEN_BITS: Int\n val BLUE_BITS: Int\n
val ALPHA_BITS: Int\n val DEPTH_BITS: Int\n val STENCIL_BITS: Int\n val
POLYGON_OFFSET_UNITS: Int\n val POLYGON_OFFSET_FACTOR: Int\n val
TEXTURE_BINDING_2D: Int\n val SAMPLE_BUFFERS: Int\n val SAMPLES: Int\n val
SAMPLE_COVERAGE_VALUE: Int\n val SAMPLE_COVERAGE_INVERT: Int\n val
COMPRESSED_TEXTURE_FORMATS: Int\n val DONT_CARE: Int\n val FASTEST: Int\n val
NICEST: Int\n val GENERATE_MIPMAP_HINT: Int\n val BYTE: Int\n val UNSIGNED_BYTE:
Int\n val SHORT: Int\n val UNSIGNED_SHORT: Int\n val INT: Int\n val UNSIGNED_INT: Int\n
val FLOAT: Int\n val DEPTH_COMPONENT: Int\n val ALPHA: Int\n val RGB: Int\n val
RGBA: Int\n val LUMINANCE: Int\n val LUMINANCE_ALPHA: Int\n val

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UNSIGNED\_SHORT\_4\_4\_4\_4: Int\n val UNSIGNED\_SHORT\_5\_5\_5\_1: Int\n val  
 UNSIGNED\_SHORT\_5\_6\_5: Int\n val FRAGMENT\_SHADER: Int\n val VERTEX\_SHADER: Int\n  
 val MAX\_VERTEX\_ATTRIBS: Int\n val MAX\_VERTEX\_UNIFORM\_VECTORS: Int\n val  
 MAX\_VARYING\_VECTORS: Int\n val MAX\_COMBINED\_TEXTURE\_IMAGE\_UNITS: Int\n val  
 MAX\_VERTEX\_TEXTURE\_IMAGE\_UNITS: Int\n val MAX\_TEXTURE\_IMAGE\_UNITS: Int\n val  
 MAX\_FRAGMENT\_UNIFORM\_VECTORS: Int\n val SHADER\_TYPE: Int\n val DELETE\_STATUS:  
 Int\n val LINK\_STATUS: Int\n val VALIDATE\_STATUS: Int\n val ATTACHED\_SHADERS: Int\n  
 val ACTIVE\_UNIFORMS: Int\n val ACTIVE\_ATTRIBUTES: Int\n val  
 SHADING\_LANGUAGE\_VERSION: Int\n val CURRENT\_PROGRAM: Int\n val NEVER: Int\n val  
 LESS: Int\n val EQUAL: Int\n val LEQUAL: Int\n val GREATER: Int\n val NOTEQUAL: Int\n  
 val GEQUAL: Int\n val ALWAYS: Int\n val KEEP: Int\n val REPLACE: Int\n val INCR: Int\n  
 val DECR: Int\n val INVERT: Int\n val INCR\_WRAP: Int\n val DECR\_WRAP: Int\n val  
 VENDOR: Int\n val RENDERER: Int\n val VERSION: Int\n val NEAREST: Int\n val LINEAR:  
 Int\n val NEAREST\_MIPMAP\_NEAREST: Int\n val LINEAR\_MIPMAP\_NEAREST: Int\n val  
 NEAREST\_MIPMAP\_LINEAR: Int\n val LINEAR\_MIPMAP\_LINEAR: Int\n val  
 TEXTURE\_MAG\_FILTER: Int\n val TEXTURE\_MIN\_FILTER: Int\n val TEXTURE\_WRAP\_S: Int\n  
 val TEXTURE\_WRAP\_T: Int\n val TEXTURE\_2D: Int\n val TEXTURE: Int\n val  
 TEXTURE\_CUBE\_MAP: Int\n val TEXTURE\_BINDING\_CUBE\_MAP: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_X: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_X: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Y: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Y: Int\n val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Z: Int\n val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Z: Int\n val  
 MAX\_CUBE\_MAP\_TEXTURE\_SIZE: Int\n val TEXTURE0: Int\n val TEXTURE1: Int\n val  
 TEXTURE2: Int\n val TEXTURE3: Int\n val TEXTURE4: Int\n val TEXTURE5: Int\n val  
 TEXTURE6: Int\n val TEXTURE7: Int\n val TEXTURE8: Int\n val TEXTURE9: Int\n val  
 TEXTURE10: Int\n val TEXTURE11: Int\n val TEXTURE12: Int\n val TEXTURE13: Int\n val  
 TEXTURE14: Int\n val TEXTURE15: Int\n val TEXTURE16: Int\n val TEXTURE17: Int\n val  
 TEXTURE18: Int\n val TEXTURE19: Int\n val TEXTURE20: Int\n val TEXTURE21: Int\n val  
 TEXTURE22: Int\n val TEXTURE23: Int\n val TEXTURE24: Int\n val TEXTURE25: Int\n val  
 TEXTURE26: Int\n val TEXTURE27: Int\n val TEXTURE28: Int\n val TEXTURE29: Int\n val  
 TEXTURE30: Int\n val TEXTURE31: Int\n val ACTIVE\_TEXTURE: Int\n val REPEAT: Int\n  
 val CLAMP\_TO\_EDGE: Int\n val MIRRORED\_REPEAT: Int\n val FLOAT\_VEC2: Int\n val  
 FLOAT\_VEC3: Int\n val FLOAT\_VEC4: Int\n val INT\_VEC2: Int\n val INT\_VEC3: Int\n val  
 INT\_VEC4: Int\n val BOOL: Int\n val BOOL\_VEC2: Int\n val BOOL\_VEC3: Int\n val  
 BOOL\_VEC4: Int\n val FLOAT\_MAT2: Int\n val FLOAT\_MAT3: Int\n val FLOAT\_MAT4: Int\n  
 val SAMPLER\_2D: Int\n val SAMPLER\_CUBE: Int\n val VERTEX\_ATTRIB\_ARRAY\_ENABLED:  
 Int\n val VERTEX\_ATTRIB\_ARRAY\_SIZE: Int\n val VERTEX\_ATTRIB\_ARRAY\_STRIDE: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_TYPE: Int\n val VERTEX\_ATTRIB\_ARRAY\_NORMALIZED: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_POINTER: Int\n val VERTEX\_ATTRIB\_ARRAY\_BUFFER\_BINDING:  
 Int\n val IMPLEMENTATION\_COLOR\_READ\_TYPE: Int\n val  
 IMPLEMENTATION\_COLOR\_READ\_FORMAT: Int\n val COMPILE\_STATUS: Int\n val  
 LOW\_FLOAT: Int\n val MEDIUM\_FLOAT: Int\n val HIGH\_FLOAT: Int\n val LOW\_INT: Int\n  
 val MEDIUM\_INT: Int\n val HIGH\_INT: Int\n val FRAMEBUFFER: Int\n val RENDERBUFFER:  
 Int\n val RGBA4: Int\n val RGB5\_A1: Int\n val RGB565: Int\n val DEPTH\_COMPONENT16:  
 Int\n val STENCIL\_INDEX: Int\n val STENCIL\_INDEX8: Int\n val DEPTH\_STENCIL: Int\n val  
 RENDERBUFFER\_WIDTH: Int\n val RENDERBUFFER\_HEIGHT: Int\n val  
 RENDERBUFFER\_INTERNAL\_FORMAT: Int\n val RENDERBUFFER\_RED\_SIZE: Int\n val  
 RENDERBUFFER\_GREEN\_SIZE: Int\n val RENDERBUFFER\_BLUE\_SIZE: Int\n val  
 RENDERBUFFER\_ALPHA\_SIZE: Int\n val RENDERBUFFER\_DEPTH\_SIZE: Int\n val

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RENDERBUFFER_STENCIL_SIZE: Int\n    val FRAMEBUFFER_ATTACHMENT_OBJECT_TYPE: Int\n
val FRAMEBUFFER_ATTACHMENT_OBJECT_NAME: Int\n    val
FRAMEBUFFER_ATTACHMENT_TEXTURE_LEVEL: Int\n    val
FRAMEBUFFER_ATTACHMENT_TEXTURE_CUBE_MAP_FACE: Int\n    val COLOR_ATTACHMENT0:
Int\n    val DEPTH_ATTACHMENT: Int\n    val STENCIL_ATTACHMENT: Int\n    val
DEPTH_STENCIL_ATTACHMENT: Int\n    val NONE: Int\n    val FRAMEBUFFER_COMPLETE: Int\n
val FRAMEBUFFER_INCOMPLETE_ATTACHMENT: Int\n    val
FRAMEBUFFER_INCOMPLETE_MISSING_ATTACHMENT: Int\n    val
FRAMEBUFFER_INCOMPLETE_DIMENSIONS: Int\n    val FRAMEBUFFER_UNSUPPORTED: Int\n
val FRAMEBUFFER_BINDING: Int\n    val RENDERBUFFER_BINDING: Int\n    val
MAX_RENDERBUFFER_SIZE: Int\n    val INVALID_FRAMEBUFFER_OPERATION: Int\n    val
UNPACK_FLIP_Y_WEBGL: Int\n    val UNPACK_PREMULTIPLY_ALPHA_WEBGL: Int\n    val
CONTEXT_LOST_WEBGL: Int\n    val UNPACK_COLORSPACE_CONVERSION_WEBGL: Int\n    val
BROWSER_DEFAULT_WEBGL: Int\n    }\n}\n\n**\n * Exposes the JavaScript
[WebGLRenderingContext](https://developer.mozilla.org/en/docs/Web/API/WebGLRenderingContext) to Kotlin\n
*\npublic external abstract class WebGLRenderingContext : WebGLRenderingContextBase, RenderingContext {\n
companion object {\n    val DEPTH_BUFFER_BIT: Int\n    val STENCIL_BUFFER_BIT: Int\n    val
COLOR_BUFFER_BIT: Int\n    val POINTS: Int\n    val LINES: Int\n    val LINE_LOOP: Int\n    val
LINE_STRIP: Int\n    val TRIANGLES: Int\n    val TRIANGLE_STRIP: Int\n    val TRIANGLE_FAN:
Int\n    val ZERO: Int\n    val ONE: Int\n    val SRC_COLOR: Int\n    val ONE_MINUS_SRC_COLOR:
Int\n    val SRC_ALPHA: Int\n    val ONE_MINUS_SRC_ALPHA: Int\n    val DST_ALPHA: Int\n    val
ONE_MINUS_DST_ALPHA: Int\n    val DST_COLOR: Int\n    val ONE_MINUS_DST_COLOR: Int\n
val SRC_ALPHA_SATURATE: Int\n    val FUNC_ADD: Int\n    val BLEND_EQUATION: Int\n    val
BLEND_EQUATION_RGB: Int\n    val BLEND_EQUATION_ALPHA: Int\n    val FUNC_SUBTRACT:
Int\n    val FUNC_REVERSE_SUBTRACT: Int\n    val BLEND_DST_RGB: Int\n    val
BLEND_SRC_RGB: Int\n    val BLEND_DST_ALPHA: Int\n    val BLEND_SRC_ALPHA: Int\n    val
CONSTANT_COLOR: Int\n    val ONE_MINUS_CONSTANT_COLOR: Int\n    val CONSTANT_ALPHA:
Int\n    val ONE_MINUS_CONSTANT_ALPHA: Int\n    val BLEND_COLOR: Int\n    val
ARRAY_BUFFER: Int\n    val ELEMENT_ARRAY_BUFFER: Int\n    val ARRAY_BUFFER_BINDING:
Int\n    val ELEMENT_ARRAY_BUFFER_BINDING: Int\n    val STREAM_DRAW: Int\n    val
STATIC_DRAW: Int\n    val DYNAMIC_DRAW: Int\n    val BUFFER_SIZE: Int\n    val
BUFFER_USAGE: Int\n    val CURRENT_VERTEX_ATTRIB: Int\n    val FRONT: Int\n    val BACK:
Int\n    val FRONT_AND_BACK: Int\n    val CULL_FACE: Int\n    val BLEND: Int\n    val DITHER:
Int\n    val STENCIL_TEST: Int\n    val DEPTH_TEST: Int\n    val SCISSOR_TEST: Int\n    val
POLYGON_OFFSET_FILL: Int\n    val SAMPLE_ALPHA_TO_COVERAGE: Int\n    val
SAMPLE_COVERAGE: Int\n    val NO_ERROR: Int\n    val INVALID_ENUM: Int\n    val
INVALID_VALUE: Int\n    val INVALID_OPERATION: Int\n    val OUT_OF_MEMORY: Int\n    val CW:
Int\n    val CCW: Int\n    val LINE_WIDTH: Int\n    val ALIASED_POINT_SIZE_RANGE: Int\n    val
ALIASED_LINE_WIDTH_RANGE: Int\n    val CULL_FACE_MODE: Int\n    val FRONT_FACE: Int\n
val DEPTH_RANGE: Int\n    val DEPTH_WRITEMASK: Int\n    val DEPTH_CLEAR_VALUE: Int\n    val
DEPTH_FUNC: Int\n    val STENCIL_CLEAR_VALUE: Int\n    val STENCIL_FUNC: Int\n    val
STENCIL_FAIL: Int\n    val STENCIL_PASS_DEPTH_FAIL: Int\n    val STENCIL_PASS_DEPTH_PASS:
Int\n    val STENCIL_REF: Int\n    val STENCIL_VALUE_MASK: Int\n    val STENCIL_WRITEMASK:
Int\n    val STENCIL_BACK_FUNC: Int\n    val STENCIL_BACK_FAIL: Int\n    val
STENCIL_BACK_PASS_DEPTH_FAIL: Int\n    val STENCIL_BACK_PASS_DEPTH_PASS: Int\n    val
STENCIL_BACK_REF: Int\n    val STENCIL_BACK_VALUE_MASK: Int\n    val
STENCIL_BACK_WRITEMASK: Int\n    val VIEWPORT: Int\n    val SCISSOR_BOX: Int\n    val
COLOR_CLEAR_VALUE: Int\n    val COLOR_WRITEMASK: Int\n    val UNPACK_ALIGNMENT: Int\n

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val PACK\_ALIGNMENT: Int\n      val MAX\_TEXTURE\_SIZE: Int\n      val MAX\_VIEWPORT\_DIMS: Int\n  
 val SUBPIXEL\_BITS: Int\n      val RED\_BITS: Int\n      val GREEN\_BITS: Int\n      val BLUE\_BITS: Int\n  
 val ALPHA\_BITS: Int\n      val DEPTH\_BITS: Int\n      val STENCIL\_BITS: Int\n      val  
 POLYGON\_OFFSET\_UNITS: Int\n      val POLYGON\_OFFSET\_FACTOR: Int\n      val  
 TEXTURE\_BINDING\_2D: Int\n      val SAMPLE\_BUFFERS: Int\n      val SAMPLES: Int\n      val  
 SAMPLE\_COVERAGE\_VALUE: Int\n      val SAMPLE\_COVERAGE\_INVERT: Int\n      val  
 COMPRESSED\_TEXTURE\_FORMATS: Int\n      val DONT\_CARE: Int\n      val FASTEST: Int\n      val  
 NICEST: Int\n      val GENERATE\_MIPMAP\_HINT: Int\n      val BYTE: Int\n      val UNSIGNED\_BYTE:  
 Int\n      val SHORT: Int\n      val UNSIGNED\_SHORT: Int\n      val INT: Int\n      val UNSIGNED\_INT: Int\n  
 val FLOAT: Int\n      val DEPTH\_COMPONENT: Int\n      val ALPHA: Int\n      val RGB: Int\n      val  
 RGBA: Int\n      val LUMINANCE: Int\n      val LUMINANCE\_ALPHA: Int\n      val  
 UNSIGNED\_SHORT\_4\_4\_4\_4: Int\n      val UNSIGNED\_SHORT\_5\_5\_5\_1: Int\n      val  
 UNSIGNED\_SHORT\_5\_6\_5: Int\n      val FRAGMENT\_SHADER: Int\n      val VERTEX\_SHADER: Int\n  
 val MAX\_VERTEX\_ATTRIBS: Int\n      val MAX\_VERTEX\_UNIFORM\_VECTORS: Int\n      val  
 MAX\_VARYING\_VECTORS: Int\n      val MAX\_COMBINED\_TEXTURE\_IMAGE\_UNITS: Int\n      val  
 MAX\_VERTEX\_TEXTURE\_IMAGE\_UNITS: Int\n      val MAX\_TEXTURE\_IMAGE\_UNITS: Int\n      val  
 MAX\_FRAGMENT\_UNIFORM\_VECTORS: Int\n      val SHADER\_TYPE: Int\n      val DELETE\_STATUS:  
 Int\n      val LINK\_STATUS: Int\n      val VALIDATE\_STATUS: Int\n      val ATTACHED\_SHADERS: Int\n  
 val ACTIVE\_UNIFORMS: Int\n      val ACTIVE\_ATTRIBUTES: Int\n      val  
 SHADING\_LANGUAGE\_VERSION: Int\n      val CURRENT\_PROGRAM: Int\n      val NEVER: Int\n      val  
 LESS: Int\n      val EQUAL: Int\n      val LEQUAL: Int\n      val GREATER: Int\n      val NOTEQUAL: Int\n  
 val GEQUAL: Int\n      val ALWAYS: Int\n      val KEEP: Int\n      val REPLACE: Int\n      val INCR: Int\n  
 val DECR: Int\n      val INVERT: Int\n      val INCR\_WRAP: Int\n      val DECR\_WRAP: Int\n      val  
 VENDOR: Int\n      val RENDERER: Int\n      val VERSION: Int\n      val NEAREST: Int\n      val LINEAR:  
 Int\n      val NEAREST\_MIPMAP\_NEAREST: Int\n      val LINEAR\_MIPMAP\_NEAREST: Int\n      val  
 NEAREST\_MIPMAP\_LINEAR: Int\n      val LINEAR\_MIPMAP\_LINEAR: Int\n      val  
 TEXTURE\_MAG\_FILTER: Int\n      val TEXTURE\_MIN\_FILTER: Int\n      val TEXTURE\_WRAP\_S: Int\n  
 val TEXTURE\_WRAP\_T: Int\n      val TEXTURE\_2D: Int\n      val TEXTURE: Int\n      val  
 TEXTURE\_CUBE\_MAP: Int\n      val TEXTURE\_BINDING\_CUBE\_MAP: Int\n      val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_X: Int\n      val TEXTURE\_CUBE\_MAP\_NEGATIVE\_X: Int\n      val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Y: Int\n      val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Y: Int\n      val  
 TEXTURE\_CUBE\_MAP\_POSITIVE\_Z: Int\n      val TEXTURE\_CUBE\_MAP\_NEGATIVE\_Z: Int\n      val  
 MAX\_CUBE\_MAP\_TEXTURE\_SIZE: Int\n      val TEXTURE0: Int\n      val TEXTURE1: Int\n      val  
 TEXTURE2: Int\n      val TEXTURE3: Int\n      val TEXTURE4: Int\n      val TEXTURE5: Int\n      val  
 TEXTURE6: Int\n      val TEXTURE7: Int\n      val TEXTURE8: Int\n      val TEXTURE9: Int\n      val  
 TEXTURE10: Int\n      val TEXTURE11: Int\n      val TEXTURE12: Int\n      val TEXTURE13: Int\n      val  
 TEXTURE14: Int\n      val TEXTURE15: Int\n      val TEXTURE16: Int\n      val TEXTURE17: Int\n      val  
 TEXTURE18: Int\n      val TEXTURE19: Int\n      val TEXTURE20: Int\n      val TEXTURE21: Int\n      val  
 TEXTURE22: Int\n      val TEXTURE23: Int\n      val TEXTURE24: Int\n      val TEXTURE25: Int\n      val  
 TEXTURE26: Int\n      val TEXTURE27: Int\n      val TEXTURE28: Int\n      val TEXTURE29: Int\n      val  
 TEXTURE30: Int\n      val TEXTURE31: Int\n      val ACTIVE\_TEXTURE: Int\n      val REPEAT: Int\n  
 val CLAMP\_TO\_EDGE: Int\n      val MIRRORED\_REPEAT: Int\n      val FLOAT\_VEC2: Int\n      val  
 FLOAT\_VEC3: Int\n      val FLOAT\_VEC4: Int\n      val INT\_VEC2: Int\n      val INT\_VEC3: Int\n      val  
 INT\_VEC4: Int\n      val BOOL: Int\n      val BOOL\_VEC2: Int\n      val BOOL\_VEC3: Int\n      val  
 BOOL\_VEC4: Int\n      val FLOAT\_MAT2: Int\n      val FLOAT\_MAT3: Int\n      val FLOAT\_MAT4: Int\n  
 val SAMPLER\_2D: Int\n      val SAMPLER\_CUBE: Int\n      val VERTEX\_ATTRIB\_ARRAY\_ENABLED:  
 Int\n      val VERTEX\_ATTRIB\_ARRAY\_SIZE: Int\n      val VERTEX\_ATTRIB\_ARRAY\_STRIDE: Int\n  
 val VERTEX\_ATTRIB\_ARRAY\_TYPE: Int\n      val VERTEX\_ATTRIB\_ARRAY\_NORMALIZED: Int\n



```

Array<Byte>, offset: Int = definedExternally)\n fun subarray(start: Int, end: Int): Int8Array\n\n companion
object {\n val BYTES_PER_ELEMENT: Int\n }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int8Array.get(index: Int):
Byte = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int8Array.set(index: Int,
value: Byte) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Uint8Array](https://developer.mozilla.org/en/docs/Web/API/Uint8Array) to Kotlin\n *\npublic external open class
Uint8Array : ArrayBufferView {\n constructor(length: Int)\n constructor(array: Uint8Array)\n
constructor(array: Array<Byte>)\n constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n open val length: Int\n override val buffer: ArrayBuffer\n override val byteOffset:
Int\n override val byteLength: Int\n fun set(array: Uint8Array, offset: Int = definedExternally)\n fun set(array:
Array<Byte>, offset: Int = definedExternally)\n fun subarray(start: Int, end: Int): Uint8Array\n\n companion
object {\n val BYTES_PER_ELEMENT: Int\n }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint8Array.get(index: Int):
Byte = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint8Array.set(index: Int,
value: Byte) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Uint8ClampedArray](https://developer.mozilla.org/en/docs/Web/API/Uint8ClampedArray) to Kotlin\n *\npublic
external open class Uint8ClampedArray : ArrayBufferView {\n constructor(length: Int)\n constructor(array:
Uint8ClampedArray)\n constructor(array: Array<Byte>)\n constructor(buffer: ArrayBuffer, byteOffset: Int =
definedExternally, length: Int = definedExternally)\n open val length: Int\n override val buffer: ArrayBuffer\n
override val byteOffset: Int\n override val byteLength: Int\n fun set(array: Uint8ClampedArray, offset: Int =
definedExternally)\n fun set(array: Array<Byte>, offset: Int = definedExternally)\n fun subarray(start: Int, end:
Int): Uint8ClampedArray\n\n companion object {\n val BYTES_PER_ELEMENT: Int\n
}\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
Uint8ClampedArray.get(index: Int): Byte = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
Uint8ClampedArray.set(index: Int, value: Byte) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Int16Array](https://developer.mozilla.org/en/docs/Web/API/Int16Array) to Kotlin\n *\npublic external open class
Int16Array : ArrayBufferView {\n constructor(length: Int)\n constructor(array: Int16Array)\n
constructor(array: Array<Short>)\n constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n open val length: Int\n override val buffer: ArrayBuffer\n override val byteOffset:
Int\n override val byteLength: Int\n fun set(array: Int16Array, offset: Int = definedExternally)\n fun set(array:
Array<Short>, offset: Int = definedExternally)\n fun subarray(start: Int, end: Int): Int16Array\n\n companion
object {\n val BYTES_PER_ELEMENT: Int\n }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int16Array.get(index: Int):
Short = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int16Array.set(index: Int,
value: Short) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Uint16Array](https://developer.mozilla.org/en/docs/Web/API/Uint16Array) to Kotlin\n *\npublic external open
class Uint16Array : ArrayBufferView {\n constructor(length: Int)\n constructor(array: Uint16Array)\n
constructor(array: Array<Short>)\n constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n open val length: Int\n override val buffer: ArrayBuffer\n override val byteOffset:
Int\n override val byteLength: Int\n fun set(array: Uint16Array, offset: Int = definedExternally)\n fun set(array:
Array<Short>, offset: Int = definedExternally)\n fun subarray(start: Int, end: Int): Uint16Array\n\n companion
object {\n val BYTES_PER_ELEMENT: Int\n }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint16Array.get(index: Int):

```

```

Short = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint16Array.set(index: Int,
value: Short) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Int32Array](https://developer.mozilla.org/en/docs/Web/API/Int32Array) to Kotlin\n *\npublic external open class
Int32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Int32Array)\n
constructor(array: Array<Int>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int
= definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset: Int\n
override val byteLength: Int\n  fun set(array: Int32Array, offset: Int = definedExternally)\n  fun set(array:
Array<Int>, offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Int32Array\n\n  companion object
{\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int32Array.get(index: Int): Int
= asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Int32Array.set(index: Int,
value: Int) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Uint32Array](https://developer.mozilla.org/en/docs/Web/API/Uint32Array) to Kotlin\n *\npublic external open
class Uint32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Uint32Array)\n
constructor(array: Array<Int>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length: Int
= definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset: Int\n
override val byteLength: Int\n  fun set(array: Uint32Array, offset: Int = definedExternally)\n  fun set(array:
Array<Int>, offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Uint32Array\n\n  companion
object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint32Array.get(index: Int):
Int = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Uint32Array.set(index: Int,
value: Int) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Float32Array](https://developer.mozilla.org/en/docs/Web/API/Float32Array) to Kotlin\n *\npublic external open
class Float32Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Float32Array)\n
constructor(array: Array<Float>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset:
Int\n  override val byteLength: Int\n  fun set(array: Float32Array, offset: Int = definedExternally)\n  fun
set(array: Array<Float>, offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Float32Array\n\n
companion object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Float32Array.get(index: Int):
Float = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Float32Array.set(index: Int,
value: Float) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[Float64Array](https://developer.mozilla.org/en/docs/Web/API/Float64Array) to Kotlin\n *\npublic external open
class Float64Array : ArrayBufferView {\n  constructor(length: Int)\n  constructor(array: Float64Array)\n
constructor(array: Array<Double>)\n  constructor(buffer: ArrayBuffer, byteOffset: Int = definedExternally, length:
Int = definedExternally)\n  open val length: Int\n  override val buffer: ArrayBuffer\n  override val byteOffset:
Int\n  override val byteLength: Int\n  fun set(array: Float64Array, offset: Int = definedExternally)\n  fun
set(array: Array<Double>, offset: Int = definedExternally)\n  fun subarray(start: Int, end: Int): Float64Array\n\n
companion object {\n    val BYTES_PER_ELEMENT: Int\n  }\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Float64Array.get(index: Int):
Double = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Float64Array.set(index: Int,

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value: Double) { asDynamic()[index] = value }\n\n/**\n * Exposes the JavaScript
[DataView](https://developer.mozilla.org/en/docs/Web/API/DataView) to Kotlin\n */\npublic external open class
DataView(buffer: ArrayBuffer, byteOffset: Int = definedExternally, byteLength: Int = definedExternally) :
ArrayBufferView {\n    override val buffer: ArrayBuffer\n    override val byteOffset: Int\n    override val
byteLength: Int\n    fun getInt8(byteOffset: Int): Byte\n    fun getUint8(byteOffset: Int): Byte\n    fun
getInt16(byteOffset: Int, littleEndian: Boolean = definedExternally): Short\n    fun getUint16(byteOffset: Int,
littleEndian: Boolean = definedExternally): Short\n    fun getInt32(byteOffset: Int, littleEndian: Boolean =
definedExternally): Int\n    fun getUint32(byteOffset: Int, littleEndian: Boolean = definedExternally): Int\n    fun
getFloat32(byteOffset: Int, littleEndian: Boolean = definedExternally): Float\n    fun getFloat64(byteOffset: Int,
littleEndian: Boolean = definedExternally): Double\n    fun setInt8(byteOffset: Int, value: Byte)\n    fun
setUint8(byteOffset: Int, value: Byte)\n    fun setInt16(byteOffset: Int, value: Short, littleEndian: Boolean =
definedExternally)\n    fun setUint16(byteOffset: Int, value: Short, littleEndian: Boolean = definedExternally)\n
fun setInt32(byteOffset: Int, value: Int, littleEndian: Boolean = definedExternally)\n    fun setUint32(byteOffset: Int,
value: Int, littleEndian: Boolean = definedExternally)\n    fun setFloat32(byteOffset: Int, value: Float, littleEndian:
Boolean = definedExternally)\n    fun setFloat64(byteOffset: Int, value: Double, littleEndian: Boolean =
definedExternally)\n}\n\npublic external interface BufferDataSource\n\npublic external interface
TexImageSource", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n *
Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See github.com/kotlin/dukat for
details\n\npackage org.w3c.dom.clipboard\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport
org.w3c.dom.*\nimport org.w3c.dom.events.*\n\npublic external interface ClipboardEventInit : EventInit {\n    var
clipboardData: DataTransfer? /* = null */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ClipboardEventInit(clipboardData:
DataTransfer? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
ClipboardEventInit {\n    val o = js("{}")\n    o["clipboardData"] = clipboardData\n    o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n    o["composed"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[ClipboardEvent](https://developer.mozilla.org/en/docs/Web/API/ClipboardEvent) to Kotlin\n */\npublic external
open class ClipboardEvent(type: String, eventInitDict: ClipboardEventInit = definedExternally) : Event {\n    open
val clipboardData: DataTransfer?\n\n    companion object {\n        val NONE: Short\n        val
CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n
    }\n}\n\n/**\n * Exposes the JavaScript [Clipboard](https://developer.mozilla.org/en/docs/Web/API/Clipboard) to
Kotlin\n */\npublic external abstract class Clipboard : EventTarget {\n    fun read(): Promise<DataTransfer>\n    fun
readText(): Promise<String>\n    fun write(data: DataTransfer): Promise<Unit>\n    fun writeText(data: String):
Promise<Unit>\n}\n\npublic external interface ClipboardPermissionDescriptor {\n    var allowWithoutGesture:
Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun
ClipboardPermissionDescriptor(allowWithoutGesture: Boolean? = false): ClipboardPermissionDescriptor {\n    val
o = js("{}")\n    o["allowWithoutGesture"] = allowWithoutGesture\n    return o\n}", "/*\n * Copyright 2010-
2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-
GENERATED, DO NOT EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.dom.css\n\nimport
kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\n\npublic external abstract class MediaList :
ItemArrayLike<String> {\n    open var mediaText: String\n    fun appendMedium(medium: String)\n    fun
deleteMedium(medium: String)\n    override fun item(index: Int):
String?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun MediaList.get(index: Int):

```

String? = asDynamic()[index]\n\n/\*\*\n \* Exposes the JavaScript

[StyleSheet](https://developer.mozilla.org/en/docs/Web/API/StyleSheet) to Kotlin\n \*/\npublic external abstract class StyleSheet {\n open val type: String\n open val href: String?\n open val ownerNode: UnionElementOrProcessingInstruction?\n open val parentStyleSheet: StyleSheet?\n open val title: String?\n open val media: MediaList\n open var disabled: Boolean\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSStyleSheet](https://developer.mozilla.org/en/docs/Web/API/CSSStyleSheet) to Kotlin\n \*/\npublic external abstract class CSSStyleSheet : StyleSheet {\n open val ownerRule: CSSRule?\n open val cssRules: CSSRuleList\n fun insertRule(rule: String, index: Int): Int\n fun deleteRule(index: Int)\n}\n\n/\*\*\n \* Exposes the JavaScript

[StyleSheetList](https://developer.mozilla.org/en/docs/Web/API/StyleSheetList) to Kotlin\n \*/\npublic external abstract class StyleSheetList : ItemArrayLike<StyleSheet> {\n override fun item(index: Int): StyleSheet?\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun StyleSheetList.get(index: Int): StyleSheet? = asDynamic()[index]\n\n/\*\*\n \* Exposes the JavaScript

[LinkStyle](https://developer.mozilla.org/en/docs/Web/API/LinkStyle) to Kotlin\n \*/\npublic external interface LinkStyle {\n val sheet: StyleSheet?\n get() = definedExternally\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSRuleList](https://developer.mozilla.org/en/docs/Web/API/CSSRuleList) to Kotlin\n \*/\npublic external abstract class CSSRuleList : ItemArrayLike<CSSRule> {\n override fun item(index: Int): CSSRule?\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun CSSRuleList.get(index: Int): CSSRule? = asDynamic()[index]\n\n/\*\*\n \* Exposes the JavaScript

[CSSRule](https://developer.mozilla.org/en/docs/Web/API/CSSRule) to Kotlin\n \*/\npublic external abstract class CSSRule {\n open val type: Short\n open var cssText: String\n open val parentRule: CSSRule?\n open val parentStyleSheet: CSSStyleSheet?\n\n companion object {\n val STYLE\_RULE: Short\n val CHARSET\_RULE: Short\n val IMPORT\_RULE: Short\n val MEDIA\_RULE: Short\n val FONT\_FACE\_RULE: Short\n val PAGE\_RULE: Short\n val MARGIN\_RULE: Short\n val NAMESPACE\_RULE: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSStyleRule](https://developer.mozilla.org/en/docs/Web/API/CSSStyleRule) to Kotlin\n \*/\npublic external abstract class CSSStyleRule : CSSRule {\n open var selectorText: String\n open val style: CSSStyleDeclaration\n\n companion object {\n val STYLE\_RULE: Short\n val CHARSET\_RULE: Short\n val IMPORT\_RULE: Short\n val MEDIA\_RULE: Short\n val FONT\_FACE\_RULE: Short\n val PAGE\_RULE: Short\n val MARGIN\_RULE: Short\n val NAMESPACE\_RULE: Short\n }\n}\n\npublic external abstract class CSSImportRule : CSSRule {\n open val href: String\n open val media: MediaList\n open val styleSheet: CSSStyleSheet\n\n companion object {\n val STYLE\_RULE: Short\n val CHARSET\_RULE: Short\n val IMPORT\_RULE: Short\n val MEDIA\_RULE: Short\n val FONT\_FACE\_RULE: Short\n val PAGE\_RULE: Short\n val MARGIN\_RULE: Short\n val NAMESPACE\_RULE: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSGroupingRule](https://developer.mozilla.org/en/docs/Web/API/CSSGroupingRule) to Kotlin\n \*/\npublic external abstract class CSSGroupingRule : CSSRule {\n open val cssRules: CSSRuleList\n fun insertRule(rule: String, index: Int): Int\n fun deleteRule(index: Int)\n\n companion object {\n val STYLE\_RULE: Short\n val CHARSET\_RULE: Short\n val IMPORT\_RULE: Short\n val MEDIA\_RULE: Short\n val FONT\_FACE\_RULE: Short\n val PAGE\_RULE: Short\n val MARGIN\_RULE: Short\n val NAMESPACE\_RULE: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSMediaRule](https://developer.mozilla.org/en/docs/Web/API/CSSMediaRule) to Kotlin\n \*/\npublic external abstract class CSSMediaRule : CSSGroupingRule {\n open val media: MediaList\n\n companion object {\n val STYLE\_RULE: Short\n val CHARSET\_RULE: Short\n val IMPORT\_RULE: Short\n val MEDIA\_RULE: Short\n val FONT\_FACE\_RULE: Short\n val PAGE\_RULE: Short\n val MARGIN\_RULE: Short\n val NAMESPACE\_RULE: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[CSSPageRule](https://developer.mozilla.org/en/docs/Web/API/CSSPageRule) to Kotlin\n \*/\npublic external

```

abstract class CSSPageRule : CSSGroupingRule {\n  open var selectorText: String\n  open val style:
CSSStyleDeclaration\n\n  companion object {\n    val STYLE_RULE: Short\n    val CHARSET_RULE:
Short\n    val IMPORT_RULE: Short\n    val MEDIA_RULE: Short\n    val FONT_FACE_RULE: Short\n
    val PAGE_RULE: Short\n    val MARGIN_RULE: Short\n    val NAMESPACE_RULE: Short\n
  }\n}\n\npublic external abstract class CSSMarginRule : CSSRule {\n  open val name: String\n  open val style:
CSSStyleDeclaration\n\n  companion object {\n    val STYLE_RULE: Short\n    val CHARSET_RULE:
Short\n    val IMPORT_RULE: Short\n    val MEDIA_RULE: Short\n    val FONT_FACE_RULE: Short\n
    val PAGE_RULE: Short\n    val MARGIN_RULE: Short\n    val NAMESPACE_RULE: Short\n
  }\n}\n\n/**\n * Exposes the JavaScript
[CSSNamespaceRule](https://developer.mozilla.org/en/docs/Web/API/CSSNamespaceRule) to Kotlin\n */\n\npublic
external abstract class CSSNamespaceRule : CSSRule {\n  open val namespaceURI: String\n  open val prefix:
String\n\n  companion object {\n    val STYLE_RULE: Short\n    val CHARSET_RULE: Short\n    val
IMPORT_RULE: Short\n    val MEDIA_RULE: Short\n    val FONT_FACE_RULE: Short\n    val
PAGE_RULE: Short\n    val MARGIN_RULE: Short\n    val NAMESPACE_RULE: Short\n  }\n}\n\n/**\n *
Exposes the JavaScript
[CSSStyleDeclaration](https://developer.mozilla.org/en/docs/Web/API/CSSStyleDeclaration) to Kotlin\n */\n\npublic
external abstract class CSSStyleDeclaration : ItemArrayLike<String> {\n  open var cssText: String\n  open val
parentRule: CSSRule?\n  open var cssFloat: String\n  open var alignContent: String\n  open var alignItems:
String\n  open var alignSelf: String\n  open var animation: String\n  open var animationDelay: String\n  open
var animationDirection: String\n  open var animationDuration: String\n  open var animationFillMode: String\n
open var animationIterationCount: String\n  open var animationName: String\n  open var animationPlayState:
String\n  open var animationTimingFunction: String\n  open var backfaceVisibility: String\n  open var
background: String\n  open var backgroundAttachment: String\n  open var backgroundClip: String\n  open var
backgroundColor: String\n  open var backgroundImage: String\n  open var backgroundOrigin: String\n  open var
backgroundPosition: String\n  open var backgroundRepeat: String\n  open var backgroundSize: String\n  open
var border: String\n  open var borderBottom: String\n  open var borderBottomColor: String\n  open var
borderBottomLeftRadius: String\n  open var borderBottomRightRadius: String\n  open var borderBottomStyle:
String\n  open var borderBottomWidth: String\n  open var borderCollapse: String\n  open var borderColor:
String\n  open var borderImage: String\n  open var borderImageOutset: String\n  open var borderImageRepeat:
String\n  open var borderImageSlice: String\n  open var borderImageSource: String\n  open var
borderImageWidth: String\n  open var borderLeft: String\n  open var borderLeftColor: String\n  open var
borderLeftStyle: String\n  open var borderLeftWidth: String\n  open var borderRadius: String\n  open var
borderRight: String\n  open var borderRightColor: String\n  open var borderRightStyle: String\n  open var
borderRightWidth: String\n  open var borderSpacing: String\n  open var borderStyle: String\n  open var
borderTop: String\n  open var borderTopColor: String\n  open var borderTopLeftRadius: String\n  open var
borderTopRightRadius: String\n  open var borderTopStyle: String\n  open var borderTopWidth: String\n  open
var borderWidth: String\n  open var bottom: String\n  open var boxDecorationBreak: String\n  open var
boxShadow: String\n  open var boxSizing: String\n  open var breakAfter: String\n  open var breakBefore:
String\n  open var breakInside: String\n  open var captionSide: String\n  open var clear: String\n  open var clip:
String\n  open var color: String\n  open var columnCount: String\n  open var columnFill: String\n  open var
columnGap: String\n  open var columnRule: String\n  open var columnRuleColor: String\n  open var
columnRuleStyle: String\n  open var columnRuleWidth: String\n  open var columnSpan: String\n  open var
columnWidth: String\n  open var columns: String\n  open var content: String\n  open var counterIncrement:
String\n  open var counterReset: String\n  open var cursor: String\n  open var direction: String\n  open var
display: String\n  open var emptyCells: String\n  open var filter: String\n  open var flex: String\n  open var
flexBasis: String\n  open var flexDirection: String\n  open var flexFlow: String\n  open var flexGrow: String\n
open var flexShrink: String\n  open var flexWrap: String\n  open var font: String\n  open var fontFamily:
String\n  open var fontFeatureSettings: String\n  open var fontKerning: String\n  open var

```

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fontLanguageOverride: String\n open var fontSize: String\n open var fontSizeAdjust: String\n open var
fontStretch: String\n open var fontStyle: String\n open var fontSynthesis: String\n open var fontVariant:
String\n open var fontVariantAlternates: String\n open var fontVariantCaps: String\n open var
fontVariantEastAsian: String\n open var fontVariantLigatures: String\n open var fontVariantNumeric: String\n
open var fontVariantPosition: String\n open var fontWeight: String\n open var hangingPunctuation: String\n
open var height: String\n open var hyphens: String\n open var imageOrientation: String\n open var
imageRendering: String\n open var imageResolution: String\n open var imeMode: String\n open var
justifyContent: String\n open var left: String\n open var letterSpacing: String\n open var lineBreak: String\n
open var lineHeight: String\n open var listStyle: String\n open var listStyleImage: String\n open var
listStylePosition: String\n open var listStyleType: String\n open var margin: String\n open var marginBottom:
String\n open var marginLeft: String\n open var marginRight: String\n open var marginTop: String\n open
var mark: String\n open var markAfter: String\n open var markBefore: String\n open var marks: String\n
open var marqueeDirection: String\n open var marqueePlayCount: String\n open var marqueeSpeed: String\n
open var marqueeStyle: String\n open var mask: String\n open var maskType: String\n open var maxHeight:
String\n open var maxWidth: String\n open var minHeight: String\n open var minWidth: String\n open var
navDown: String\n open var navIndex: String\n open var navLeft: String\n open var navRight: String\n open
var navUp: String\n open var objectFit: String\n open var objectPosition: String\n open var opacity: String\n
open var order: String\n open var orphans: String\n open var outline: String\n open var outlineColor: String\n
open var outlineOffset: String\n open var outlineStyle: String\n open var outlineWidth: String\n open var
overflowWrap: String\n open var overflowX: String\n open var overflowY: String\n open var padding:
String\n open var paddingBottom: String\n open var paddingLeft: String\n open var paddingRight: String\n
open var paddingTop: String\n open var pageBreakAfter: String\n open var pageBreakBefore: String\n open
var pageBreakInside: String\n open var perspective: String\n open var perspectiveOrigin: String\n open var
phonemes: String\n open var position: String\n open var quotes: String\n open var resize: String\n open var
rest: String\n open var restAfter: String\n open var restBefore: String\n open var right: String\n open var
tabSize: String\n open var tableLayout: String\n open var textAlign: String\n open var textAlignLast: String\n
open var textCombineUpright: String\n open var textDecoration: String\n open var textDecorationColor:
String\n open var textDecorationLine: String\n open var textDecorationStyle: String\n open var textIndent:
String\n open var textJustify: String\n open var textOrientation: String\n open var textOverflow: String\n
open var textShadow: String\n open var textTransform: String\n open var textUnderlinePosition: String\n open
var top: String\n open var transform: String\n open var transformOrigin: String\n open var transformStyle:
String\n open var transition: String\n open var transitionDelay: String\n open var transitionDuration: String\n
open var transitionProperty: String\n open var transitionTimingFunction: String\n open var unicodeBidi:
String\n open var verticalAlign: String\n open var visibility: String\n open var voiceBalance: String\n open
var voiceDuration: String\n open var voicePitch: String\n open var voicePitchRange: String\n open var
voiceRate: String\n open var voiceStress: String\n open var voiceVolume: String\n open var whiteSpace:
String\n open var widows: String\n open var width: String\n open var wordBreak: String\n open var
wordSpacing: String\n open var wordWrap: String\n open var writingMode: String\n open var zIndex: String\n
open var _dashed_attribute: String\n open var _camel_cased_attribute: String\n open var
_webkit_cased_attribute: String\n fun getProperty(property: String): String\n fun
getPropertyPriority(property: String): String\n fun setProperty(property: String, value: String, priority: String =
definedExternally)\n fun setPropertyValue(property: String, value: String)\n fun setPropertyPriority(property:
String, priority: String)\n fun removeProperty(property: String): String\n override fun item(index: Int):
String\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
CSSStyleDeclaration.get(index: Int): String? = asDynamic()[index]\n\npublic external interface
ElementCSSInlineStyle {\n val style: CSSStyleDeclaration\n}\n\n/**\n * Exposes the JavaScript
[CSS](https://developer.mozilla.org/en/docs/Web/API/CSS) to Kotlin\n */\n\npublic external abstract class CSS {\n

```

```

companion object {
    fun escape(ident: String): String {
        return ident.replace("\\", "\\\\")
    }
}

public external interface
UnionElementOrProcessingInstruction, /* Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors. Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file. NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT! See
github.com/kotlin/dukat for details package org.w3c.dom.encryptedmedia import kotlin.js import
org.khronos.webgl import org.w3c.dom import org.w3c.dom.events */ Exposes the JavaScript
[MediaKeySystemConfiguration](https://developer.mozilla.org/en/docs/Web/API/MediaKeySystemConfiguration)
to Kotlin

public external interface MediaKeySystemConfiguration {
    var label: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
    var initDataTypes: Array<String>? /* = arrayOf() */
    get() = definedExternally
    set(value) = definedExternally
    var audioCapabilities:
Array<MediaKeySystemMediaCapability>? /* = arrayOf() */
    get() = definedExternally
    set(value) =
definedExternally
    var videoCapabilities: Array<MediaKeySystemMediaCapability>? /* = arrayOf() */
    get() = definedExternally
    set(value) = definedExternally
    var distinctiveIdentifier:
MediaKeysRequirement? /* = MediaKeysRequirement.OPTIONAL */
    get() = definedExternally
    set(value) = definedExternally
    var persistentState: MediaKeysRequirement? /* =
MediaKeysRequirement.OPTIONAL */
    get() = definedExternally
    set(value) = definedExternally
    var sessionTypes: Array<String>?
    get() = definedExternally
    set(value) =
definedExternally
}

@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun MediaKeySystemConfiguration(label:
String? = "", initDataTypes: Array<String>? = arrayOf(), audioCapabilities:
Array<MediaKeySystemMediaCapability>? = arrayOf(), videoCapabilities:
Array<MediaKeySystemMediaCapability>? = arrayOf(), distinctiveIdentifier: MediaKeysRequirement? =
MediaKeysRequirement.OPTIONAL, persistentState: MediaKeysRequirement? =
MediaKeysRequirement.OPTIONAL, sessionTypes: Array<String>? = undefined): MediaKeySystemConfiguration
{
    val o = js("{}")
    o["label"] = label
    o["initDataTypes"] = initDataTypes
    o["audioCapabilities"] = audioCapabilities
    o["videoCapabilities"] = videoCapabilities
    o["distinctiveIdentifier"] = distinctiveIdentifier
    o["persistentState"] = persistentState
    o["sessionTypes"]
= sessionTypes
    return o
}

public external interface MediaKeySystemMediaCapability {
    var
contentType: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
    var
robustness: String? /* = "" */
    get() = definedExternally
    set(value) =
definedExternally
}

@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun
MediaKeySystemMediaCapability(contentType: String? = "", robustness: String? = ""):
MediaKeySystemMediaCapability {
    val o = js("{}")
    o["contentType"] = contentType
    o["robustness"] = robustness
    return o
}

/* Exposes the JavaScript
[MediaKeySystemAccess](https://developer.mozilla.org/en/docs/Web/API/MediaKeySystemAccess) to Kotlin

public external abstract class MediaKeySystemAccess {
    open val keySystem: String
    fun
getConfiguration(): MediaKeySystemConfiguration
    fun createMediaKeys(): Promise<MediaKeys>
}

/* Exposes the JavaScript [MediaKeys](https://developer.mozilla.org/en/docs/Web/API/MediaKeys) to Kotlin

public external abstract class MediaKeys {
    fun createSession(sessionType: MediaKeySessionType =
definedExternally): MediaKeySession
    fun setServerCertificate(serverCertificate: dynamic):
Promise<Boolean>
}

/* Exposes the JavaScript
[MediaKeySession](https://developer.mozilla.org/en/docs/Web/API/MediaKeySession) to Kotlin

public external abstract class MediaKeySession : EventTarget {
    open val sessionId: String
    open val expiration:
Double
    open val closed: Promise<Unit>
    open val keyStatuses: MediaKeyStatusMap
    open var
onkeystatuseschange: ((Event) -> dynamic)?
    open var onmessage: ((MessageEvent) -> dynamic)?
    fun
generateRequest(initDataType: String, initData: dynamic): Promise<Unit>
    fun load(sessionId: String):
Promise<Boolean>
    fun update(response: dynamic): Promise<Unit>
    fun close(): Promise<Unit>
    fun

```

```

remove(): Promise<Unit>\n}\n\n/**\n * Exposes the JavaScript
[MediaKeyStatusMap](https://developer.mozilla.org/en/docs/Web/API/MediaKeyStatusMap) to Kotlin\n */\npublic
external abstract class MediaKeyStatusMap {\n    open val size: Int\n    fun has(keyId: dynamic): Boolean\n    fun
get(keyId: dynamic): Any?\n}\n\n/**\n * Exposes the JavaScript
[MediaKeyMessageEvent](https://developer.mozilla.org/en/docs/Web/API/MediaKeyMessageEvent) to Kotlin\n
*/\npublic external open class MediaKeyMessageEvent(type: String, eventInitDict: MediaKeyMessageEventInit) :
Event {\n    open val messageType: MediaKeyMessageType\n    open val message: ArrayBuffer\n\n    companion
object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface MediaKeyMessageEventInit : EventInit {\n    var
messageType: MediaKeyMessageType?\n    var message:
ArrayBuffer?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaKeyMessageEventInit(messageType: MediaKeyMessageType?, message: ArrayBuffer?, bubbles: Boolean? =
false, cancelable: Boolean? = false, composed: Boolean? = false): MediaKeyMessageEventInit {\n    val o =
js(\"({})\")\n    o[\"messageType\"] = messageType\n    o[\"message\"] = message\n    o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\npublic external open class
MediaEncryptedEvent(type: String, eventInitDict: MediaEncryptedEventInit = definedExternally) : Event {\n
open val initDataType: String\n    open val initData: ArrayBuffer?\n\n    companion object {\n        val NONE:
Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE:
Short\n    }\n}\n\npublic external interface MediaEncryptedEventInit : EventInit {\n    var initDataType: String? /* =
\"\" */\n    get() = definedExternally\n    set(value) = definedExternally\n    var initData: ArrayBuffer? /* = null
*/\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
MediaEncryptedEventInit(initDataType: String? = \"\", initData: ArrayBuffer? = null, bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): MediaEncryptedEventInit {\n    val o = js(\"({})\")\n
o[\"initDataType\"] = initData\n    o[\"initData\"] = initData\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"]
= cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaKeysRequirement {\n    companion object\n}\n\npublic inline val
MediaKeysRequirement.Companion.REQUIRED: MediaKeysRequirement get() =
\"required\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\npublic inline val
MediaKeysRequirement.Companion.OPTIONAL: MediaKeysRequirement get() =
\"optional\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\npublic inline val
MediaKeysRequirement.Companion.NOT_ALLOWED: MediaKeysRequirement get() = \"not-
allowed\".asDynamic().unsafeCast<MediaKeysRequirement>()\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaKeySessionType {\n    companion object\n}\n\npublic inline val
MediaKeySessionType.Companion.TEMPORARY: MediaKeySessionType get() =
\"temporary\".asDynamic().unsafeCast<MediaKeySessionType>()\n\npublic inline val
MediaKeySessionType.Companion.PERSISTENT_LICENSE: MediaKeySessionType get() = \"persistent-
license\".asDynamic().unsafeCast<MediaKeySessionType>()\n\n/* please, don't implement this interface!
*/\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface MediaKeyStatus {\n    companion object\n}\n\npublic inline val MediaKeyStatus.Companion.USABLE:
MediaKeyStatus get() = \"usable\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.EXPIRED: MediaKeyStatus get() =
\"expired\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.RELEASED: MediaKeyStatus get() =

```

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\released\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.OUTPUT_RESTRICTED: MediaKeyStatus get() = \"output-
restricted\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.OUTPUT_DOWNSCALED: MediaKeyStatus get() = \"output-
downscaled\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.STATUS_PENDING: MediaKeyStatus get() = \"status-
pending\".asDynamic().unsafeCast<MediaKeyStatus>()\n\npublic inline val
MediaKeyStatus.Companion.INTERNAL_ERROR: MediaKeyStatus get() = \"internal-
error\".asDynamic().unsafeCast<MediaKeyStatus>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface MediaKeyMessageType {\n    companion object\n}\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_REQUEST: MediaKeyMessageType get() = \"license-
request\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_RENEWAL: MediaKeyMessageType get() = \"license-
renewal\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.LICENSE_RELEASE: MediaKeyMessageType get() = \"license-
release\".asDynamic().unsafeCast<MediaKeyMessageType>()\n\npublic inline val
MediaKeyMessageType.Companion.INDIVIDUALIZATION_REQUEST: MediaKeyMessageType get() =
\"individualization-request\".asDynamic().unsafeCast<MediaKeyMessageType>()),\"/>\n\n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors.\n\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n\n *\n\n// NOTE: THIS FILE IS AUTO-
GENERATED, DO NOT EDIT!\n\n// See github.com/kotlin/dukat for details\n\npackage
org.w3c.dom.events\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\n\n/**\n * Exposes
the JavaScript [UIEvent](https://developer.mozilla.org/en/docs/Web/API/UIEvent) to Kotlin\n\n *\n\npublic external
open class UIEvent(type: String, eventInitDict: UIEventInit = definedExternally) : Event {\n    open val view:
Window?\n    open val detail: Int?\n    companion object {\n        val NONE: Short?\n        val
CAPTURING_PHASE: Short?\n        val AT_TARGET: Short?\n        val BUBBLING_PHASE: Short?\n
    }\n}\n\npublic external interface UIEventInit : EventInit {\n    var view: Window? /* = null *\n    get() =
definedExternally\n    set(value) = definedExternally\n    var detail: Int? /* = 0 *\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun UIEventInit(view: Window? = null,
detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): UIEventInit
{\n    val o = js(\"({})\")\n    o[\"view\"] = view\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[FocusEvent](https://developer.mozilla.org/en/docs/Web/API/FocusEvent) to Kotlin\n\n *\n\npublic external open class
FocusEvent(type: String, eventInitDict: FocusEventInit = definedExternally) : UIEvent {\n    open val relatedTarget:
EventTarget?\n    companion object {\n        val NONE: Short?\n        val CAPTURING_PHASE: Short?\n       
val AT_TARGET: Short?\n        val BUBBLING_PHASE: Short?\n    }\n}\n\npublic external interface FocusEventInit :
UIEventInit {\n    var relatedTarget: EventTarget? /* = null *\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun FocusEventInit(relatedTarget:
EventTarget? = null, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? =
false, composed: Boolean? = false): FocusEventInit {\n    val o = js(\"({})\")\n    o[\"relatedTarget\"] =
relatedTarget\n    o[\"view\"] = view\n    o[\"detail\"] = detail\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] =
cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MouseEvent](https://developer.mozilla.org/en/docs/Web/API/MouseEvent) to Kotlin\n\n *\n\npublic external open class
MouseEvent(type: String, eventInitDict: MouseEventInit = definedExternally) : UIEvent,
UnionElementOrMouseEvent {\n    open val screenX: Int?\n    open val screenY: Int?\n    open val clientX: Int?

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open val clientY: Int\n  open val ctrlKey: Boolean\n  open val shiftKey: Boolean\n  open val altKey: Boolean\n
open val metaKey: Boolean\n  open val button: Short\n  open val buttons: Short\n  open val relatedTarget:
EventTarget?\n  open val region: String?\n  open val pageX: Double\n  open val pageY: Double\n  open val x:
Double\n  open val y: Double\n  open val offsetX: Double\n  open val offsetY: Double\n  fun
getModifierState(keyArg: String): Boolean\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface MouseEventInit : EventModifierInit {\n  var screenX: Int? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var screenY: Int? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var clientX: Int? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var clientY: Int? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var button: Short? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var buttons: Short? /* = 0 */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var relatedTarget: EventTarget? /* = null */\n    get()
= definedExternally\n    set(value) = definedExternally\n  var region: String? /* = null */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MouseEventInit(screenX: Int? = 0,
screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget:
EventTarget? = null, region: String? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean?
= false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false,
modifierFn: Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false,
modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false,
modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): MouseEventInit {\n  val o =
js(\"({})\")\n  o[\"screenX\"] = screenX\n  o[\"screenY\"] = screenY\n  o[\"clientX\"] = clientX\n  o[\"clientY\"]
= clientY\n  o[\"button\"] = button\n  o[\"buttons\"] = buttons\n  o[\"relatedTarget\"] = relatedTarget\n
o[\"region\"] = region\n  o[\"ctrlKey\"] = ctrlKey\n  o[\"shiftKey\"] = shiftKey\n  o[\"altKey\"] = altKey\n
o[\"metaKey\"] = metaKey\n  o[\"modifierAltGraph\"] = modifierAltGraph\n  o[\"modifierCapsLock\"] =
modifierCapsLock\n  o[\"modifierFn\"] = modifierFn\n  o[\"modifierFnLock\"] = modifierFnLock\n
o[\"modifierHyper\"] = modifierHyper\n  o[\"modifierNumLock\"] = modifierNumLock\n
o[\"modifierScrollLock\"] = modifierScrollLock\n  o[\"modifierSuper\"] = modifierSuper\n
o[\"modifierSymbol\"] = modifierSymbol\n  o[\"modifierSymbolLock\"] = modifierSymbolLock\n  o[\"view\"] =
view\n  o[\"detail\"] = detail\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] = cancelable\n  o[\"composed\"] =
composed\n  return o\n}\n\npublic external interface EventModifierInit : UIEventInit {\n  var ctrlKey: Boolean?
/* = false */\n    get() = definedExternally\n    set(value) = definedExternally\n  var shiftKey: Boolean? /* =
false */\n    get() = definedExternally\n    set(value) = definedExternally\n  var altKey: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n  var metaKey: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierAltGraph: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierCapsLock: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n  var modifierFn: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierFnLock: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierHyper: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierNumLock: Boolean? /* = false */\n
get() = definedExternally\n    set(value) = definedExternally\n  var modifierScrollLock: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n  var modifierSuper: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n  var modifierSymbol: Boolean? /* = false
*/\n    get() = definedExternally\n    set(value) = definedExternally\n  var modifierSymbolLock: Boolean? /* =
false */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",

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\INVISIBLE_MEMBER\)\n@kotlin.internal.InlineOnly\npublic inline fun EventModifierInit(ctrlKey: Boolean? =
false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph:
Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? =
false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false,
modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view:
Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): EventModifierInit {\n    val o = js("{}")\n    o["ctrlKey"] = ctrlKey\n    o["shiftKey"] = shiftKey\n
o["altKey"] = altKey\n    o["metaKey"] = metaKey\n    o["modifierAltGraph"] = modifierAltGraph\n
o["modifierCapsLock"] = modifierCapsLock\n    o["modifierFn"] = modifierFn\n    o["modifierFnLock"] =
modifierFnLock\n    o["modifierHyper"] = modifierHyper\n    o["modifierNumLock"] = modifierNumLock\n
o["modifierScrollLock"] = modifierScrollLock\n    o["modifierSuper"] = modifierSuper\n
o["modifierSymbol"] = modifierSymbol\n    o["modifierSymbolLock"] = modifierSymbolLock\n    o["view"] =
view\n    o["detail"] = detail\n    o["bubbles"] = bubbles\n    o["cancelable"] = cancelable\n    o["composed"] =
composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[WheelEvent](https://developer.mozilla.org/en/docs/Web/API/WheelEvent) to Kotlin\n */\npublic external open
class WheelEvent(type: String, eventInitDict: WheelEventInit = definedExternally) : MouseEvent {\n    open val
deltaX: Double\n    open val deltaY: Double\n    open val deltaZ: Double\n    open val deltaMode: Int\n\n    companion object {\n        val DOM_DELTA_PIXEL: Int\n        val DOM_DELTA_LINE: Int\n        val
DOM_DELTA_PAGE: Int\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val
AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n\n    public external interface WheelEventInit :
MouseEventInit {\n        var deltaX: Double? /* = 0.0 */\n            get() = definedExternally\n            set(value) =
definedExternally\n        var deltaY: Double? /* = 0.0 */\n            get() = definedExternally\n            set(value) =
definedExternally\n        var deltaZ: Double? /* = 0.0 */\n            get() = definedExternally\n            set(value) =
definedExternally\n        var deltaMode: Int? /* = 0 */\n            get() = definedExternally\n            set(value) =
definedExternally\n    }\n\n    @Suppress(\INVISIBLE_REFERENCE",
\INVISIBLE_MEMBER\)\n@kotlin.internal.InlineOnly\npublic inline fun WheelEventInit(deltaX: Double? = 0.0,
deltaY: Double? = 0.0, deltaZ: Double? = 0.0, deltaMode: Int? = 0, screenX: Int? = 0, screenY: Int? = 0, clientX:
Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? = null, region:
String? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean?
= false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false,
modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false,
modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false,
modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false,
cancelable: Boolean? = false, composed: Boolean? = false): WheelEventInit {\n    val o = js("{}")\n
o["deltaX"] = deltaX\n    o["deltaY"] = deltaY\n    o["deltaZ"] = deltaZ\n    o["deltaMode"] = deltaMode\n
o["screenX"] = screenX\n    o["screenY"] = screenY\n    o["clientX"] = clientX\n    o["clientY"] = clientY\n
o["button"] = button\n    o["buttons"] = buttons\n    o["relatedTarget"] = relatedTarget\n    o["region"] =
region\n    o["ctrlKey"] = ctrlKey\n    o["shiftKey"] = shiftKey\n    o["altKey"] = altKey\n    o["metaKey"] =
metaKey\n    o["modifierAltGraph"] = modifierAltGraph\n    o["modifierCapsLock"] = modifierCapsLock\n
o["modifierFn"] = modifierFn\n    o["modifierFnLock"] = modifierFnLock\n    o["modifierHyper"] =
modifierHyper\n    o["modifierNumLock"] = modifierNumLock\n    o["modifierScrollLock"] =
modifierScrollLock\n    o["modifierSuper"] = modifierSuper\n    o["modifierSymbol"] = modifierSymbol\n
o["modifierSymbolLock"] = modifierSymbolLock\n    o["view"] = view\n    o["detail"] = detail\n
o["bubbles"] = bubbles\n    o["cancelable"] = cancelable\n    o["composed"] = composed\n    return
o\n}\n\n/**\n * Exposes the JavaScript [InputEvent](https://developer.mozilla.org/en/docs/Web/API/InputEvent) to
Kotlin\n */\npublic external open class InputEvent(type: String, eventInitDict: InputEventInit = definedExternally) :
UIEvent {\n    open val data: String\n    open val isComposing: Boolean\n\n    companion object {\n        val NONE:
Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE:

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Short\n }n}\n\npublic external interface InputEventInit : UIEventInit {\n  var data: String? /* = \"\" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var isComposing: Boolean? /* = false */\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",  
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun InputEventInit(data: String? = \"\",  
isComposing: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable:  
Boolean? = false, composed: Boolean? = false): InputEventInit {\n  val o = js(\"({})\")\n  o[\"data\"] = data\n  o[\"isComposing\"] = isComposing\n  o[\"view\"] = view\n  o[\"detail\"] = detail\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] = cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript  
[KeyboardEvent](https://developer.mozilla.org/en/docs/Web/API/KeyboardEvent) to Kotlin\n */\npublic external  
open class KeyboardEvent(type: String, eventInitDict: KeyboardEventInit = definedExternally) : UIEvent {\n  open val key: String\n  open val code: String\n  open val location: Int\n  open val ctrlKey: Boolean\n  open val  
shiftKey: Boolean\n  open val altKey: Boolean\n  open val metaKey: Boolean\n  open val repeat: Boolean\n  open val isComposing: Boolean\n  open val charCode: Int\n  open val keyCode: Int\n  open val which: Int\n  fun getModifierState(keyArg: String): Boolean\n}\n\ncompanion object {\n  val  
DOM_KEY_LOCATION_STANDARD: Int\n  val DOM_KEY_LOCATION_LEFT: Int\n  val  
DOM_KEY_LOCATION_RIGHT: Int\n  val DOM_KEY_LOCATION_NUMPAD: Int\n  val NONE:  
Short\n  val CAPTURING_PHASE: Short\n  val AT_TARGET: Short\n  val BUBBLING_PHASE:  
Short\n }n}\n\npublic external interface KeyboardEventInit : EventModifierInit {\n  var key: String? /* = \"\" */\n  /*\n  get() = definedExternally\n  set(value) = definedExternally\n  var code: String? /* = \"\" */\n  get() =  
definedExternally\n  set(value) = definedExternally\n  var location: Int? /* = 0 */\n  get() =  
definedExternally\n  set(value) = definedExternally\n  var repeat: Boolean? /* = false */\n  get() =  
definedExternally\n  set(value) = definedExternally\n  var isComposing: Boolean? /* = false */\n  get() =  
definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",  
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun KeyboardEventInit(key: String? = \"\",  
code: String? = \"\", location: Int? = 0, repeat: Boolean? = false, isComposing: Boolean? = false, ctrlKey: Boolean?  
= false, shiftKey: Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph:  
Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? =  
false, modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false,  
modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view:  
Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =  
false): KeyboardEventInit {\n  val o = js(\"({})\")\n  o[\"key\"] = key\n  o[\"code\"] = code\n  o[\"location\"] =  
location\n  o[\"repeat\"] = repeat\n  o[\"isComposing\"] = isComposing\n  o[\"ctrlKey\"] = ctrlKey\n  o[\"shiftKey\"] = shiftKey\n  o[\"altKey\"] = altKey\n  o[\"metaKey\"] = metaKey\n  o[\"modifierAltGraph\"] =  
modifierAltGraph\n  o[\"modifierCapsLock\"] = modifierCapsLock\n  o[\"modifierFn\"] = modifierFn\n  o[\"modifierFnLock\"] = modifierFnLock\n  o[\"modifierHyper\"] = modifierHyper\n  o[\"modifierNumLock\"] =  
modifierNumLock\n  o[\"modifierScrollLock\"] = modifierScrollLock\n  o[\"modifierSuper\"] = modifierSuper\n  o[\"modifierSymbol\"] = modifierSymbol\n  o[\"modifierSymbolLock\"] = modifierSymbolLock\n  o[\"view\"] =  
view\n  o[\"detail\"] = detail\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] = cancelable\n  o[\"composed\"] =  
composed\n  return o\n}\n\n/**\n * Exposes the JavaScript  
[CompositionEvent](https://developer.mozilla.org/en/docs/Web/API/CompositionEvent) to Kotlin\n */\npublic  
external open class CompositionEvent(type: String, eventInitDict: CompositionEventInit = definedExternally) :  
UIEvent {\n  open val data: String\n}\n\ncompanion object {\n  val NONE: Short\n  val  
CAPTURING_PHASE: Short\n  val AT_TARGET: Short\n  val BUBBLING_PHASE: Short\n }n}\n\npublic external interface CompositionEventInit : UIEventInit {\n  var data: String? /* = \"\" */\n  get() =  
definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",  
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CompositionEventInit(data: String? =  
\"\", view: Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:  
Boolean? = false): CompositionEventInit {\n  val o = js(\"({})\")\n  o[\"data\"] = data\n  o[\"view\"] = view\n
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o["detail"] = detail\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] =
composed\n  return o\n}\n\n/**\n * Exposes the JavaScript
[Event](https://developer.mozilla.org/en/docs/Web/API/Event) to Kotlin\n */\npublic external open class
Event(type: String, eventInitDict: EventInit = definedExternally) {\n  open val type: String\n  open val target:
EventTarget?\n  open val currentTarget: EventTarget?\n  open val eventPhase: Short\n  open val bubbles:
Boolean\n  open val cancelable: Boolean\n  open val defaultPrevented: Boolean\n  open val composed:
Boolean\n  open val isTrusted: Boolean\n  open val timeStamp: Number\n  fun composedPath():
Array<EventTarget>\n  fun stopPropagation()\n  fun stopImmediatePropagation()\n  fun preventDefault()\n
fun initEvent(type: String, bubbles: Boolean, cancelable: Boolean)\n\n  companion object {\n    val NONE:
Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE:
Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[EventTarget](https://developer.mozilla.org/en/docs/Web/API/EventTarget) to Kotlin\n */\npublic external abstract
class EventTarget {\n  fun addEventListener(type: String, callback: EventListener?, options: dynamic =
definedExternally)\n  fun addEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic =
definedExternally)\n  fun removeEventListener(type: String, callback: EventListener?, options: dynamic =
definedExternally)\n  fun removeEventListener(type: String, callback: ((Event) -> Unit)?, options: dynamic =
definedExternally)\n  fun dispatchEvent(event: Event): Boolean\n}\n\n/**\n * Exposes the JavaScript
[EventListener](https://developer.mozilla.org/en/docs/Web/API/EventListener) to Kotlin\n */\npublic external
interface EventListener {\n  fun handleEvent(event: Event)\n}\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT!\n\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.dom\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.clipboard.*\nimport org.w3c.dom.css.*\nimport
org.w3c.dom.encryptedmedia.*\nimport org.w3c.dom.events.*\nimport org.w3c.dom.mediacapture.*\nimport
org.w3c.dom.mediasource.*\nimport org.w3c.dom.pointerevents.*\nimport org.w3c.dom.svg.*\nimport
org.w3c.fetch.*\nimport org.w3c.files.*\nimport org.w3c.performance.*\nimport org.w3c.workers.*\nimport
org.w3c.xhr.*\n\npublic external abstract class HTMLAllCollection {\n  open val length: Int\n  fun
item(nameOrIndex: String = definedExternally): UnionElementOrHTMLCollection?\n  fun namedItem(name:
String): UnionElementOrHTMLCollection?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLAllCollection.get(index: Int): Element? =
asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLAllCollection.get(name: String): UnionElementOrHTMLCollection? = asDynamic()[name]\n\n/**\n *
Exposes the JavaScript
[HTMLFormControlsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLFormControlsCollection)
to Kotlin\n */\npublic external abstract class HTMLFormControlsCollection : HTMLCollection\n\n/**\n * Exposes
the JavaScript [RadioNodeList](https://developer.mozilla.org/en/docs/Web/API/RadioNodeList) to Kotlin\n
*/\npublic external abstract class RadioNodeList : NodeList, UnionElementOrRadioNodeList {\n  open var value:
String\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptionsCollection](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionsCollection) to Kotlin\n
*/\npublic external abstract class HTMLOptionsCollection : HTMLCollection {\n  override var length: Int\n  open
var selectedIndex: Int\n  fun add(element: UnionHTMLOptGroupElementOrHTMLOptionElement, before:
dynamic = definedExternally)\n  fun remove(index: Int)\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLOptionsCollection.set(index: Int, option: HTMLOptionElement?) { asDynamic()[index] = option }\n\n/**\n *
Exposes the JavaScript [HTMLInputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLInputElement) to
Kotlin\n */\npublic external abstract class HTMLInputElement : Element, GlobalEventHandlers,

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DocumentAndElementEventHandlers, ElementContentEditable, ElementCSSInlineStyle {\n  open var title:
String\n  open var lang: String\n  open var translate: Boolean\n  open var dir: String\n  open val dataset:
DOMStringMap\n  open var hidden: Boolean\n  open var tabIndex: Int\n  open var accessKey: String\n  open
val accessKeyLabel: String\n  open var draggable: Boolean\n  open val dropzone: DOMTokenList\n  open var
contextMenu: HTMLMenuElement?\n  open var spellcheck: Boolean\n  open var innerText: String\n  open val
offsetParent: Element?\n  open val offsetTop: Int\n  open val offsetLeft: Int\n  open val offsetWidth: Int\n  open
val offsetHeight: Int\n  fun click()\n  fun focus()\n  fun blur()\n  fun forceSpellCheck()\n\n  companion object
{\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[HTMLUnknownElement](https://developer.mozilla.org/en/docs/Web/API/HTMLUnknownElement) to Kotlin\n
*\npublic external abstract class HTMLUnknownElement : HTMLElement {\n  companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[DOMStringMap](https://developer.mozilla.org/en/docs/Web/API/DOMStringMap) to Kotlin\n
*\npublic external
abstract class DOMStringMap\n\n@Suppress("\nINVISIBLE_REFERENCE",
\nINVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun DOMStringMap.get(name:
String): String? = asDynamic()[name]\n\n\n@Suppress("\nINVISIBLE_REFERENCE",
\nINVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun DOMStringMap.set(name:
String, value: String) { asDynamic()[name] = value }\n}\n\n/**\n * Exposes the JavaScript
[HTMLHtmlElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHtmlElement) to Kotlin\n
*\npublic
external abstract class HTMLHtmlElement : HTMLElement {\n  open var version: String\n\n  companion object
{\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[HTMLHeadElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadElement) to Kotlin\n
*\npublic
external abstract class HTMLHeadElement : HTMLElement {\n  companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:

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Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTitleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTitleElement) to Kotlin\n */\npublic
external abstract class HTMLTitleElement : HTMLElement {\n    open var text: String\n\n    companion object {\n
        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLBaseElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBaseElement) to Kotlin\n */\npublic
external abstract class HTMLBaseElement : HTMLElement {\n    open var href: String\n    open var target:
String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLLinkElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLinkElement) to Kotlin\n */\npublic
external abstract class HTMLLinkElement : HTMLElement, LinkStyle {\n    open var href: String\n    open var
crossOrigin: String?\n    open var rel: String\n    open var `as`: RequestDestination\n    open val relList:
DOMTokenList\n    open var media: String\n    open var nonce: String\n    open var hreflang: String\n    open var
type: String\n    open val sizes: DOMTokenList\n    open varreferrerPolicy: String\n    open var charset: String\n
    open var rev: String\n    open var target: String\n    open var scope: String\n    open var workerType:
WorkerType\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLMetaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMetaElement) to Kotlin\n */\npublic
external abstract class HTMLMetaElement : HTMLElement {\n    open var name: String\n    open var httpEquiv:
String\n    open var content: String\n    open var scheme: String\n\n    companion object {\n        val

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ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLStyleElement](https://developer.mozilla.org/en/docs/Web/API/HTMLStyleElement) to Kotlin \n * \n public
external abstract class HTMLStyleElement : HTMLElement, LinkStyle { \n    open var media: String \n    open var
nonce: String \n    open var type: String \n \n    companion object { \n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLBodyElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBodyElement) to Kotlin \n * \n public
external abstract class HTMLBodyElement : HTMLElement, WindowEventHandlers { \n    open var text: String \n
    open var link: String \n    open var vLink: String \n    open var aLink: String \n    open var bgColor: String \n
    open
var background: String \n \n    companion object { \n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLHeadingElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHeadingElement) to Kotlin \n
* \n public external abstract class HTMLHeadingElement : HTMLElement { \n    open var align: String \n \n
    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val
TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLParagraphElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParagraphElement) to Kotlin \n
* \n public external abstract class HTMLParagraphElement : HTMLElement { \n    open var align: String \n \n
    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val

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TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLHRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLHRElement) to Kotlin \n * \n public
external abstract class HTMLHRElement : HTMLElement { \n    open var align: String \n    open var color: String \n
open var noShade: Boolean \n    open var size: String \n    open var width: String \n \n    companion object { \n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLPreElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPreElement) to Kotlin \n * \n public
external abstract class HTMLPreElement : HTMLElement { \n    open var width: Int \n \n    companion object { \n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLQuoteElement](https://developer.mozilla.org/en/docs/Web/API/HTMLQuoteElement) to Kotlin \n * \n public
external abstract class HTMLQuoteElement : HTMLElement { \n    open var cite: String \n \n    companion object { \n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[HTMLLOListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLOListElement) to Kotlin \n * \n public
external abstract class HTMLLOListElement : HTMLElement { \n    open var reversed: Boolean \n    open var start:
Int \n    open var type: String \n    open var compact: Boolean \n \n    companion object { \n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val

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DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLUListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLUListElement) to Kotlin\n */\npublic
external abstract class HTMLUListElement : HTMLElement {\n    open var compact: Boolean\n    open var type:
String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLLIElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLIElement) to Kotlin\n */\npublic
external abstract class HTMLLIElement : HTMLElement {\n    open var value: Int\n    open var type: String\n\n
companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val
TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLDListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDListElement) to Kotlin\n */\npublic
external abstract class HTMLDListElement : HTMLElement {\n    open var compact: Boolean\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLDivElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDivElement) to Kotlin\n */\npublic
external abstract class HTMLDivElement : HTMLElement {\n    open var align: String\n\n    companion object {\n
        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n

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    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLAnchorElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAnchorElement) to Kotlin\n
*/\npublic external abstract class HTMLAnchorElement : HTMLInputElement, HTMLHyperlinkElementUtils {\n    open
var target: String\n    open var download: String\n    open var ping: String\n    open var rel: String\n    open val
reList: DOMTokenList\n    open var hreflang: String\n    open var type: String\n    open var text: String\n    open
var referrerPolicy: String\n    open var coords: String\n    open var charset: String\n    open var name: String\n
open var rev: String\n    open var shape: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLDataElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataElement) to Kotlin\n
*/\npublic external abstract class HTMLDataElement : HTMLInputElement {\n    open var value: String\n\n    companion object {\n
        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTimeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTimeElement) to Kotlin\n
*/\npublic external abstract class HTMLTimeElement : HTMLInputElement {\n    open var dateTime: String\n\n    companion
object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE:
Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLSpanElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSpanElement) to Kotlin\n
*/\npublic external abstract class HTMLSpanElement : HTMLInputElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n

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    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLBRElement](https://developer.mozilla.org/en/docs/Web/API/HTMLBRElement) to Kotlin\n
*\npublic external abstract class HTMLBRElement : HTMLElement {\n    open var clear: String\n
    companion object {\n        val ELEMENT_NODE: Short\n            val ATTRIBUTE_NODE: Short\n            val TEXT_NODE: Short\n            val
CDATA_SECTION_NODE: Short\n            val ENTITY_REFERENCE_NODE: Short\n            val ENTITY_NODE:
Short\n            val PROCESSING_INSTRUCTION_NODE: Short\n            val COMMENT_NODE: Short\n            val
DOCUMENT_NODE: Short\n            val DOCUMENT_TYPE_NODE: Short\n            val
DOCUMENT_FRAGMENT_NODE: Short\n            val NOTATION_NODE: Short\n            val
DOCUMENT_POSITION_DISCONNECTED: Short\n            val DOCUMENT_POSITION_PRECEDING: Short\n
            val DOCUMENT_POSITION_FOLLOWING: Short\n            val DOCUMENT_POSITION_CONTAINS: Short\n
            val DOCUMENT_POSITION_CONTAINED_BY: Short\n            val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLHyperlinkElementUtils](https://developer.mozilla.org/en/docs/Web/API/HTMLHyperlinkElementUtils) to
Kotlin\n
*\npublic external interface HTMLHyperlinkElementUtils {\n    var href: String\n    val origin: String\n
var protocol: String\n    var username: String\n    var password: String\n    var host: String\n    var hostname:
String\n    var port: String\n    var pathname: String\n    var search: String\n    var hash: String\n}\n\n/**\n * Exposes
the JavaScript [HTMLModElement](https://developer.mozilla.org/en/docs/Web/API/HTMLModElement) to
Kotlin\n
*\npublic external abstract class HTMLModElement : HTMLElement {\n    open var cite: String\n    open
var dateTime: String\n
    companion object {\n        val ELEMENT_NODE: Short\n            val
ATTRIBUTE_NODE: Short\n            val TEXT_NODE: Short\n            val CDATA_SECTION_NODE: Short\n            val
ENTITY_REFERENCE_NODE: Short\n            val ENTITY_NODE: Short\n            val
PROCESSING_INSTRUCTION_NODE: Short\n            val COMMENT_NODE: Short\n            val
DOCUMENT_NODE: Short\n            val DOCUMENT_TYPE_NODE: Short\n            val
DOCUMENT_FRAGMENT_NODE: Short\n            val NOTATION_NODE: Short\n            val
DOCUMENT_POSITION_DISCONNECTED: Short\n            val DOCUMENT_POSITION_PRECEDING: Short\n
            val DOCUMENT_POSITION_FOLLOWING: Short\n            val DOCUMENT_POSITION_CONTAINS: Short\n
            val DOCUMENT_POSITION_CONTAINED_BY: Short\n            val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLPictureElement](https://developer.mozilla.org/en/docs/Web/API/HTMLPictureElement) to Kotlin\n
*\npublic external abstract class HTMLPictureElement : HTMLElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n            val ATTRIBUTE_NODE: Short\n            val TEXT_NODE: Short\n            val
CDATA_SECTION_NODE: Short\n            val ENTITY_REFERENCE_NODE: Short\n            val ENTITY_NODE:
Short\n            val PROCESSING_INSTRUCTION_NODE: Short\n            val COMMENT_NODE: Short\n            val
DOCUMENT_NODE: Short\n            val DOCUMENT_TYPE_NODE: Short\n            val
DOCUMENT_FRAGMENT_NODE: Short\n            val NOTATION_NODE: Short\n            val
DOCUMENT_POSITION_DISCONNECTED: Short\n            val DOCUMENT_POSITION_PRECEDING: Short\n
            val DOCUMENT_POSITION_FOLLOWING: Short\n            val DOCUMENT_POSITION_CONTAINS: Short\n
            val DOCUMENT_POSITION_CONTAINED_BY: Short\n            val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLSourceElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSourceElement) to Kotlin\n
*\npublic external abstract class HTMLSourceElement : HTMLElement {\n    open var src: String\n    open
var type: String\n    open var srcset: String\n    open var sizes: String\n    open var media: String\n
    companion object {\n        val ELEMENT_NODE: Short\n            val ATTRIBUTE_NODE: Short\n            val TEXT_NODE: Short\n
            val CDATA_SECTION_NODE: Short\n            val ENTITY_REFERENCE_NODE: Short\n            val
ENTITY_NODE: Short\n            val PROCESSING_INSTRUCTION_NODE: Short\n            val COMMENT_NODE:
Short\n            val DOCUMENT_NODE: Short\n            val DOCUMENT_TYPE_NODE: Short\n            val
DOCUMENT_FRAGMENT_NODE: Short\n            val NOTATION_NODE: Short\n            val

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DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLImageElement](https://developer.mozilla.org/en/docs/Web/API/HTMLImageElement) to Kotlin\n
*\npublic external abstract class HTMLImageElement : HTMLInputElement, HTMLOrSVGImageElement,
TexImageSource {\n    open var alt: String\n    open var src: String\n    open var srcset: String\n    open var sizes:
String\n    open var crossOrigin: String?\n    open var useMap: String\n    open var isMap: Boolean\n    open var
width: Int\n    open var height: Int\n    open val naturalWidth: Int\n    open val naturalHeight: Int\n    open val
complete: Boolean\n    open val currentSrc: String\n    open var referrerPolicy: String\n    open var name: String\n
open var lowsrc: String\n    open var align: String\n    open var hspace: Int\n    open var vspace: Int\n    open var
longDesc: String\n    open var border: String\n    open val x: Int\n    open val y: Int\n\n    companion object {\n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLIFrameElement](https://developer.mozilla.org/en/docs/Web/API/HTMLIFrameElement) to Kotlin\n
*\npublic external abstract class HTMLIFrameElement : HTMLInputElement {\n    open var src: String\n    open var
srcdoc: String\n    open var name: String\n    open val sandbox: DOMTokenList\n    open var allowFullscreen:
Boolean\n    open var allowUserMedia: Boolean\n    open var width: String\n    open var height: String\n    open var
referrerPolicy: String\n    open val contentDocument: Document?\n    open val contentWindow: Window?\n    open
var align: String\n    open var scrolling: String\n    open var frameBorder: String\n    open var longDesc: String\n
open var marginHeight: String\n    open var marginWidth: String\n    fun getSVGDocument(): Document?\n\n    companion object {\n
val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLEmbedElement](https://developer.mozilla.org/en/docs/Web/API/HTMLEmbedElement) to Kotlin\n
*\npublic external abstract class HTMLEmbedElement : HTMLInputElement {\n    open var src: String\n    open var
type: String\n    open var width: String\n    open var height: String\n    open var align: String\n    open var name:
String\n    fun getSVGDocument(): Document?\n\n    companion object {\n    val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n

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    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLElement](https://developer.mozilla.org/en/docs/Web/API/HTMLElement) to Kotlin\n
*\npublic external abstract class HTMLElement : HTMLInputElement {\n    open var data: String\n    open var
type: String\n    open var typeMustMatch: Boolean\n    open var name: String\n    open var useMap: String\n    open
val form: HTMLFormElement?\n    open var width: String\n    open var height: String\n    open val
contentDocument: Document?\n    open val contentWindow: Window?\n    open val willValidate: Boolean\n    open
val validity: ValidityState\n    open val validationMessage: String\n    open var align: String\n    open var archive:
String\n    open var code: String\n    open var declare: Boolean\n    open var hspace: Int\n    open var standby:
String\n    open var vspace: Int\n    open var codeBase: String\n    open var codeType: String\n    open var border:
String\n    fun getSVGDocument(): Document?\n    fun checkValidity(): Boolean\n    fun reportValidity():
Boolean\n    fun setCustomValidity(error: String)\n\n    companion object {\n        val ELEMENT_NODE: Short\n
        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n
        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLParamElement](https://developer.mozilla.org/en/docs/Web/API/HTMLParamElement) to Kotlin\n
*\npublic external abstract class HTMLParamElement : HTMLInputElement {\n    open var name: String\n    open var
value: String\n    open var type: String\n    open var valueType: String\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLVideoElement](https://developer.mozilla.org/en/docs/Web/API/HTMLVideoElement) to Kotlin\n
*\npublic external abstract class HTMLVideoElement : HTMLMediaElement, CanvasImageSource, TexImageSource {\n
    open var width: Int\n    open var height: Int\n    open val videoWidth: Int\n    open val videoHeight: Int\n    open var
poster: String\n    open var playsInline: Boolean\n\n    companion object {\n        val NETWORK_EMPTY: Short\n
        val NETWORK_IDLE: Short\n        val NETWORK_LOADING: Short\n        val NETWORK_NO_SOURCE:
Short\n        val HAVE_NOTHING: Short\n        val HAVE_METADATA: Short\n        val
HAVE_CURRENT_DATA: Short\n        val HAVE_FUTURE_DATA: Short\n        val HAVE_ENOUGH_DATA:
Short\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val

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DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [HTMLAudioElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAudioElement) to Kotlin\n \*\npublic external abstract class HTMLAudioElement : HTMLMediaElement {\n companion object {\n val NETWORK\_EMPTY: Short\n val NETWORK\_IDLE: Short\n val NETWORK\_LOADING: Short\n val NETWORK\_NO\_SOURCE: Short\n val HAVE\_NOTHING: Short\n val HAVE\_METADATA: Short\n val HAVE\_CURRENT\_DATA: Short\n val HAVE\_FUTURE\_DATA: Short\n val HAVE\_ENOUGH\_DATA: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [HTMLTrackElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTrackElement) to Kotlin\n \*\npublic external abstract class HTMLTrackElement : HTMLElement {\n open var kind: String\n open var src: String\n open var srclang: String\n open var label: String\n open var default: Boolean\n open val readyState: Short\n open val track: TextTrack\n\n companion object {\n val NONE: Short\n val LOADING: Short\n val LOADED: Short\n val ERROR: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [HTMLMediaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMediaElement) to Kotlin\n \*\npublic external abstract class HTMLMediaElement : HTMLElement {\n open val error: MediaError?\n open var src: String\n open var srcObject: MediaProvider?\n open val currentSrc: String\n open var crossOrigin: String?\n open val networkState: Short\n open var preload: String\n open val buffered: TimeRanges\n open val readyState: Short\n open val seeking: Boolean\n open var currentTime: Double\n open val duration: Double\n open val paused: Boolean\n open var defaultPlaybackRate: Double\n open var playbackRate: Double\n open val played: TimeRanges\n open val seekable: TimeRanges\n open val ended: Boolean\n open var autoplay: Boolean\n open var loop: Boolean\n open var controls: Boolean\n open var volume: Double\n open var muted: Boolean\n open var defaultMuted: Boolean\n open val audioTracks: AudioTrackList\n open val videoTracks: VideoTrackList\n open val textTracks: TextTrackList\n open val mediaKeys: MediaKeys?\n open var onencrypted: ((Event) -> dynamic)?\n open var onwaitingforkey: ((Event) -> dynamic)?\n fun load()\n fun canPlayType(type: String): CanPlayTypeResult\n fun fastSeek(time: Double)\n fun getStartDate(): dynamic\n fun play(): Promise<Unit>\n fun pause()\n fun addTextTrack(kind: TextTrackKind, label: String = definedExternally, language: String = definedExternally): TextTrack\n fun setMediaKeys(mediaKeys: MediaKeys?): Promise<Unit>\n\n companion object {\n val NETWORK\_EMPTY: Short\n val NETWORK\_IDLE: Short\n val NETWORK\_LOADING: Short\n val NETWORK\_NO\_SOURCE: Short\n val HAVE\_NOTHING: Short\n val HAVE\_METADATA: Short\n val HAVE\_CURRENT\_DATA: Short\n val HAVE\_FUTURE\_DATA: Short\n val HAVE\_ENOUGH\_DATA: Short\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val



[TextTrackCue](https://developer.mozilla.org/en/docs/Web/API/TextTrackCue) to Kotlin\n \*/\npublic external abstract class TextTrackCue : EventTarget {\n open val track: TextTrack?\n open var id: String\n open var startTime: Double\n open var endTime: Double\n open var pauseOnExit: Boolean\n open var onenter: ((Event) -> dynamic)?\n open var onexit: ((Event) -> dynamic)?\n}\n\n/\*\*\n \* Exposes the JavaScript

[TimeRanges](https://developer.mozilla.org/en/docs/Web/API/TimeRanges) to Kotlin\n \*/\npublic external abstract class TimeRanges {\n open val length: Int\n fun start(index: Int): Double\n fun end(index: Int): Double\n}\n\n/\*\*\n \* Exposes the JavaScript

[TrackEvent](https://developer.mozilla.org/en/docs/Web/API/TrackEvent) to Kotlin\n \*/\npublic external open class TrackEvent(type: String, eventInitDict: TrackEventInit = definedExternally) : Event {\n open val track: UnionAudioTrackOrTextTrackOrVideoTrack?\n\n companion object {\n val NONE: Short\n val CAPTURING\_PHASE: Short\n val AT\_TARGET: Short\n val BUBBLING\_PHASE: Short\n }\n}\n\npublic external interface TrackEventInit : EventInit {\n var track: UnionAudioTrackOrTextTrackOrVideoTrack? /\* = null \*/\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n\n@kotlin.internal.InlineOnly\npublic inline fun TrackEventInit(track: UnionAudioTrackOrTextTrackOrVideoTrack? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): TrackEventInit {\n val o = js(\"({})\")\n o[\"track\"] = track\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n return o\n}\n\n/\*\*\n \* Exposes the JavaScript

[HTMLElement](https://developer.mozilla.org/en/docs/Web/API/HTMLElement) to Kotlin\n \*/\npublic external abstract class HTMLElement : HTMLCollection {\n open var name: String\n open val areas: HTMLCollection\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[HTMLAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLAreaElement) to Kotlin\n \*/\npublic external abstract class HTMLAreaElement : HTMLElement, HTMLHyperlinkElementUtils {\n open var alt: String\n open var coords: String\n open var shape: String\n open var target: String\n open var download: String\n open var ping: String\n open var rel: String\n open val relList: DOMTokenList\n open var referrerPolicy: String\n open var noHref: Boolean\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[HTMLTableElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableElement) to Kotlin\n \*/\npublic external abstract class HTMLTableElement : HTMLElement {\n open var caption: HTMLTableCaptionElement?\n open var tHead: HTMLTableSectionElement?\n open var tFoot: HTMLTableSectionElement?\n open val tBodies: HTMLCollection\n open val rows: HTMLCollection\n open

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var align: String\n open var border: String\n open var frame: String\n open var rules: String\n open var
summary: String\n open var width: String\n open var bgColor: String\n open var cellPadding: String\n open
var cellSpacing: String\n fun createCaption(): HTMLTableCaptionElement\n fun deleteCaption()\n fun
createTHead(): HTMLTableSectionElement\n fun deleteTHead()\n fun createTFoot():
HTMLTableSectionElement\n fun deleteTFoot()\n fun createTBody(): HTMLTableSectionElement\n fun
insertRow(index: Int = definedExternally): HTMLTableRowElement\n fun deleteRow(index: Int)\n\n
companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val
TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTableCaptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCaptionElement) to
Kotlin\n */\npublic external abstract class HTMLTableCaptionElement : HTMLInputElement {\n open var align:
String\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n\n/**\n * Exposes the JavaScript
[HTMLTableColElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableColElement) to Kotlin\n
*/\npublic external abstract class HTMLTableColElement : HTMLInputElement {\n open var span: Int\n open var
align: String\n open var ch: String\n open var chOff: String\n open var vAlign: String\n open var width:
String\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n\n/**\n * Exposes the JavaScript
[HTMLTableSectionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableSectionElement) to
Kotlin\n */\npublic external abstract class HTMLTableSectionElement : HTMLInputElement {\n open val rows:
HTMLCollection\n open var align: String\n open var ch: String\n open var chOff: String\n open var vAlign:
String\n fun insertRow(index: Int = definedExternally): HTMLInputElement\n fun deleteRow(index: Int)\n\n
companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val
TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n

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    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTableRowElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableRowElement) to Kotlin\n
*\n\npublic external abstract class HTMLTableRowElement : HTMLElement {\n    open val rowIndex: Int\n    open
val sectionRowIndex: Int\n    open val cells: HTMLCollection\n    open var align: String\n    open var ch: String\n
open var chOff: String\n    open var vAlign: String\n    open var bgColor: String\n    fun insertCell(index: Int =
definedExternally): HTMLElement\n    fun deleteCell(index: Int)\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTableCellElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTableCellElement) to Kotlin\n
*\n\npublic external abstract class HTMLTableCellElement : HTMLElement {\n    open var colSpan: Int\n    open var
rowSpan: Int\n    open var headers: String\n    open val cellIndex: Int\n    open var scope: String\n    open var abbr:
String\n    open var align: String\n    open var axis: String\n    open var height: String\n    open var width: String\n
open var ch: String\n    open var chOff: String\n    open var noWrap: Boolean\n    open var vAlign: String\n    open
var bgColor: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLFormElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFormElement) to Kotlin\n
*\n\npublic external abstract class HTMLFormElement : HTMLElement {\n    open var acceptCharset: String\n    open var
action: String\n    open var autocomplete: String\n    open var enctype: String\n    open var encoding: String\n    open
var method: String\n    open var name: String\n    open var noValidate: Boolean\n    open var target: String\n    open
val elements: HTMLFormControlsCollection\n    open val length: Int\n    fun submit()\n    fun reset()\n    fun
checkValidity(): Boolean\n    fun reportValidity(): Boolean\n\n    companion object {\n        val ELEMENT_NODE:
Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE:
Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n\n}\n}\n\n@Suppress("INVISIBLE_REFERENCE"),

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open var disabled: Boolean\n open val form: HTMLFormElement?\n open var formAction: String\n open var
formEnctype: String\n open var formMethod: String\n open var formNoValidate: Boolean\n open var
formTarget: String\n open var name: String\n open var type: String\n open var value: String\n open var
menu: HTMLMenuElement?\n open val willValidate: Boolean\n open val validity: ValidityState\n open val
validationMessage: String\n open val labels: NodeList\n fun checkValidity(): Boolean\n fun reportValidity():
Boolean\n fun setCustomValidity(error: String)\n\n companion object {\n val ELEMENT_NODE: Short\n
val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n
val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[HTMLSelectElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSelectElement) to Kotlin\n *\npublic
external abstract class HTMLSelectElement : HTMLInputElement, ItemArrayLike<Element> {\n open var
autocomplete: String\n open var autofocus: Boolean\n open var disabled: Boolean\n open val form:
HTMLFormElement?\n open var multiple: Boolean\n open var name: String\n open var required: Boolean\n
open var size: Int\n open val type: String\n open val options: HTMLOptionsCollection\n override var length:
Int\n open val selectedOptions: HTMLCollection\n open var selectedIndex: Int\n open var value: String\n
open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n open
val labels: NodeList\n fun namedItem(name: String): HTMLOptionElement?\n fun add(element:
UnionHTMLOptGroupElementOrHTMLOptionElement, before: dynamic = definedExternally)\n fun
remove(index: Int)\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun
setCustomValidity(error: String)\n override fun item(index: Int): Element?\n\n companion object {\n val
ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n
}\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLSelectElement.get(index: Int): Element? =
asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun
HTMLSelectElement.set(index: Int, option: HTMLOptionElement?) { asDynamic()[index] = option }\n\n/**\n *
Exposes the JavaScript
[HTMLDataListElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDataListElement) to Kotlin\n *\npublic
external abstract class HTMLDataListElement : HTMLInputElement {\n open val options:
HTMLCollection\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE:
Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val

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DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptGroupElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptGroupElement) to Kotlin\n
*\npublic external abstract class HTMLOptGroupElement : HTMLInputElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n    open var disabled: Boolean\n    open var label:
String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLOptionElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOptionElement) to Kotlin\n
*\npublic external abstract class HTMLOptionElement : HTMLInputElement,
UnionHTMLOptGroupElementOrHTMLOptionElement {\n    open var disabled: Boolean\n    open val form:
HTMLFormElement?\n    open var label: String\n    open var defaultSelected: Boolean\n    open var selected:
Boolean\n    open var value: String\n    open var text: String\n    open val index: Int\n\n    companion object {\n
val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLTextAreaElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTextAreaElement) to Kotlin\n
*\npublic external abstract class HTMLTextAreaElement : HTMLInputElement {\n    open var autocomplete: String\n
open var autofocus: Boolean\n    open var cols: Int\n    open var dirName: String\n    open var disabled: Boolean\n
open val form: HTMLFormElement?\n    open var inputMode: String\n    open var maxLength: Int\n    open var
minLength: Int\n    open var name: String\n    open var placeholder: String\n    open var readOnly: Boolean\n    open
var required: Boolean\n    open var rows: Int\n    open var wrap: String\n    open val type: String\n    open var
defaultValue: String\n    open var value: String\n    open val textLength: Int\n    open val willValidate: Boolean\n
open val validity: ValidityState\n    open val validationMessage: String\n    open val labels: NodeList\n    open var
selectionStart: Int?\n    open var selectionEnd: Int?\n    open var selectionDirection: String?\n    fun checkValidity():
Boolean\n    fun reportValidity(): Boolean\n    fun setCustomValidity(error: String)\n    fun select()\n    fun
setRangeText(replacement: String)\n    fun setRangeText(replacement: String, start: Int, end: Int, selectionMode:
SelectionMode = definedExternally)\n    fun setSelectionRange(start: Int, end: Int, direction: String =
definedExternally)\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val

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DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLKeygenElement](https://developer.mozilla.org/en/docs/Web/API/HTMLKeygenElement) to Kotlin \n  
\*\npublic external abstract class HTMLKeygenElement : HTMLInputElement { \n open var autofocus: Boolean \n  
open var challenge: String \n open var disabled: Boolean \n open val form: HTMLFormElement? \n open var  
keytype: String \n open var name: String \n open val type: String \n open val willValidate: Boolean \n open val  
validity: ValidityState \n open val validationMessage: String \n open val labels: NodeList \n fun checkValidity():  
Boolean \n fun reportValidity(): Boolean \n fun setCustomValidity(error: String) \n \n companion object { \n  
val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLOutputElement](https://developer.mozilla.org/en/docs/Web/API/HTMLOutputElement) to Kotlin \n  
\*\npublic external abstract class HTMLOutputElement : HTMLInputElement { \n open val htmlFor: DOMTokenList \n  
open val form: HTMLFormElement? \n open var name: String \n open val type: String \n open var  
defaultValue: String \n open var value: String \n open val willValidate: Boolean \n open val validity:  
ValidityState \n open val validationMessage: String \n open val labels: NodeList \n fun checkValidity():  
Boolean \n fun reportValidity(): Boolean \n fun setCustomValidity(error: String) \n \n companion object { \n  
val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript  
[HTMLProgressElement](https://developer.mozilla.org/en/docs/Web/API/HTMLProgressElement) to Kotlin \n  
\*\npublic external abstract class HTMLProgressElement : HTMLInputElement { \n open var value: Double \n open  
var max: Double \n open val position: Double \n open val labels: NodeList \n \n companion object { \n val  
ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val  
CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE:  
Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val  
DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val  
DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n } \n} \n \n /\*\* \n \* Exposes the JavaScript

[HTMLMeterElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMeterElement) to Kotlin\n \* public external abstract class HTMLMeterElement : HTMLInputElement {\n open var value: Double\n open var min: Double\n open var max: Double\n open var low: Double\n open var high: Double\n open var optimum: Double\n open val labels: NodeList\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [HTMLFieldSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFieldSetElement) to Kotlin\n \* public external abstract class HTMLFieldSetElement : HTMLInputElement {\n open var disabled: Boolean\n open val form: HTMLFormElement?\n open var name: String\n open val type: String\n open val elements: HTMLCollection\n open val willValidate: Boolean\n open val validity: ValidityState\n open val validationMessage: String\n fun checkValidity(): Boolean\n fun reportValidity(): Boolean\n fun setCustomValidity(error: String)\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [HTMLLegendElement](https://developer.mozilla.org/en/docs/Web/API/HTMLLegendElement) to Kotlin\n \* public external abstract class HTMLLegendElement : HTMLInputElement {\n open val form: HTMLFormElement?\n open var align: String\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [ValidityState](https://developer.mozilla.org/en/docs/Web/API/ValidityState) to Kotlin\n \* public external abstract class ValidityState {\n open val valueMissing: Boolean\n open val typeMismatch: Boolean\n open val patternMismatch: Boolean\n open val tooLong: Boolean\n open val tooShort: Boolean\n open val rangeUnderflow: Boolean\n open val rangeOverflow: Boolean\n open val stepMismatch: Boolean\n open val badInput: Boolean\n open val customError: Boolean\n open val valid: Boolean\n }\n\n /\*\*\n \* Exposes the JavaScript [HTMLDetailsElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDetailsElement) to Kotlin\n \* public external abstract class HTMLDetailsElement : HTMLInputElement {\n open var open: Boolean\n\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val

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TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n } \n} \n\npublic external abstract class
HTMLMenuElement : HTMLInputElement { \n    open var type: String\n    open var label: String\n    open var compact:
Boolean\n\n    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n
        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE:
Short\n        val ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val
COMMENT_NODE: Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n
        val DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n } \n} \n\npublic external abstract class
HTMLMenuItemElement : HTMLInputElement { \n    open var type: String\n    open var label: String\n    open var icon:
String\n    open var disabled: Boolean\n    open var checked: Boolean\n    open var radiogroup: String\n    open var
default: Boolean\n\n    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n } \n} \n\npublic external open class
RelatedEvent(type: String, eventInitDict: RelatedEventInit = definedExternally) : Event { \n    open val
relatedTarget: EventTarget?\n\n    companion object { \n        val NONE: Short\n        val CAPTURING_PHASE:
Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n } \n} \n\npublic external interface
RelatedEventInit : EventInit { \n    var relatedTarget: EventTarget? /* = null */\n    get() = definedExternally\n
set(value) = definedExternally\n} \n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun RelatedEventInit(relatedTarget:
EventTarget? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
RelatedEventInit { \n    val o = js("{}")\n    o["relatedTarget"] = relatedTarget\n    o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n    o["composed"] = composed\n    return o\n} \n\n/**\n * Exposes the JavaScript
[HTMLDialogElement](https://developer.mozilla.org/en/docs/Web/API/HTMLDialogElement) to Kotlin\n
*/\n\npublic external abstract class HTMLDialogElement : HTMLInputElement { \n    open var open: Boolean\n    open var
returnValue: String\n    fun show(anchor: UnionElementOrMouseEvent = definedExternally)\n    fun
showModal(anchor: UnionElementOrMouseEvent = definedExternally)\n    fun close(returnValue: String =
definedExternally)\n\n    companion object { \n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val

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DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLScriptElement](https://developer.mozilla.org/en/docs/Web/API/HTMLScriptElement) to Kotlin\n */\npublic
external abstract class HTMLScriptElement : HTMLMElement, HTMLOrSVGScriptElement {\n    open var src:
String\n    open var type: String\n    open var charset: String\n    open var async: Boolean\n    open var defer:
Boolean\n    open var crossOrigin: String?\n    open var text: String\n    open var nonce: String\n    open var event:
String\n    open var htmlFor: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLTemplateElement](https://developer.mozilla.org/en/docs/Web/API/HTMLTemplateElement) to Kotlin\n
*/\npublic external abstract class HTMLTemplateElement : HTMLMElement {\n    open val content:
DocumentFragment\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[HTMLSlotElement](https://developer.mozilla.org/en/docs/Web/API/HTMLSlotElement) to Kotlin\n */\npublic
external abstract class HTMLSlotElement : HTMLMElement {\n    open var name: String\n    fun
assignedNodes(options: AssignedNodesOptions = definedExternally): Array<Node>\n\n    companion object {\n
        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\npublic external interface
AssignedNodesOptions {\n    var flatten: Boolean? /* = false */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun AssignedNodesOptions(flatten:
Boolean? = false): AssignedNodesOptions {\n    val o = js(\"({})\")\n    o[\"flatten\"] = flatten\n    return
o\n}\n\n/**\n * Exposes the JavaScript

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[HTMLCanvasElement](https://developer.mozilla.org/en/docs/Web/API/HTMLCanvasElement) to Kotlin\n
*\npublic external abstract class HTMLCanvasElement : HTMLDivElement, CanvasImageSource, TexImageSource\n
{\n  open var width: Int\n  open var height: Int\n  fun getContext(contextId: String, vararg arguments: Any?):\n  RenderingContext?\n  fun toDataURL(type: String = definedExternally, quality: Any? = definedExternally):\n  String\n  fun toBlob(_callback: (Blob?) -> Unit, type: String = definedExternally, quality: Any? =\n  definedExternally)\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE:\n  Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val\n  ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val\n  PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val\n  DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val\n  DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val\n  DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val\n  DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external interface\n  CanvasRenderingContext2DSettings {\n  var alpha: Boolean? /* = true */\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\n  "INVISIBLE_REFERENCE",\n  "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun\n  CanvasRenderingContext2DSettings(alpha: Boolean? = true): CanvasRenderingContext2DSettings {\n  val o =\n  js("{}")\n  o["alpha"] = alpha\n  return o\n}\n\n/**\n * Exposes the JavaScript\n  [CanvasRenderingContext2D](https://developer.mozilla.org/en/docs/Web/API/CanvasRenderingContext2D) to\n  Kotlin\n  *\npublic external abstract class CanvasRenderingContext2D : CanvasState, CanvasTransform,\n  CanvasCompositing, CanvasImageSmoothing, CanvasFillStrokeStyles, CanvasShadowStyles, CanvasFilters,\n  CanvasRect, CanvasDrawPath, CanvasUserInterface, CanvasText, CanvasDrawImage, CanvasHitRegion,\n  CanvasImageData, CanvasPathDrawingStyles, CanvasTextDrawingStyles, CanvasPath, RenderingContext {\n  open val canvas: HTMLCanvasElement\n}\n\npublic external interface CanvasState {\n  fun save()\n  fun\n  restore()\n}\n\npublic external interface CanvasTransform {\n  fun scale(x: Double, y: Double)\n  fun\n  rotate(angle: Double)\n  fun translate(x: Double, y: Double)\n  fun transform(a: Double, b: Double, c: Double, d:\n  Double, e: Double, f: Double)\n  fun getTransform(): DOMMatrix\n  fun setTransform(a: Double, b: Double, c:\n  Double, d: Double, e: Double, f: Double)\n  fun setTransform(transform: dynamic = definedExternally)\n  fun\n  resetTransform()\n}\n\npublic external interface CanvasCompositing {\n  var globalAlpha: Double\n  var\n  globalCompositeOperation: String\n}\n\npublic external interface CanvasImageSmoothing {\n  var\n  imageSmoothingEnabled: Boolean\n  var imageSmoothingQuality: ImageSmoothingQuality\n}\n\npublic external\n  interface CanvasFillStrokeStyles {\n  var strokeStyle: dynamic\n  get() = definedExternally\n  set(value) =\n  definedExternally\n  var fillStyle: dynamic\n  get() = definedExternally\n  set(value) = definedExternally\n  fun\n  createLinearGradient(x0: Double, y0: Double, x1: Double, y1: Double): CanvasGradient\n  fun\n  createRadialGradient(x0: Double, y0: Double, r0: Double, x1: Double, y1: Double, r1: Double): CanvasGradient\n  fun\n  createPattern(image: CanvasImageSource, repetition: String): CanvasPattern?\n}\n\npublic external interface\n  CanvasShadowStyles {\n  var shadowOffsetX: Double\n  var shadowOffsetY: Double\n  var shadowBlur:\n  Double\n  var shadowColor: String\n}\n\npublic external interface CanvasFilters {\n  var filter:\n  String\n}\n\npublic external interface CanvasRect {\n  fun clearRect(x: Double, y: Double, w: Double, h:\n  Double)\n  fun fillRect(x: Double, y: Double, w: Double, h: Double)\n  fun strokeRect(x: Double, y: Double, w:\n  Double, h: Double)\n}\n\npublic external interface CanvasDrawPath {\n  fun beginPath()\n  fun fill(fillRule:\n  CanvasFillRule = definedExternally)\n  fun fill(path: Path2D, fillRule: CanvasFillRule = definedExternally)\n  fun\n  stroke()\n  fun stroke(path: Path2D)\n  fun clip(fillRule: CanvasFillRule = definedExternally)\n  fun\n  clip(path: Path2D, fillRule: CanvasFillRule = definedExternally)\n  fun resetClip()\n  fun isPointInPath(x:\n  Double, y: Double, fillRule: CanvasFillRule = definedExternally): Boolean\n  fun isPointInPath(path: Path2D, x:\n  Double, y: Double, fillRule: CanvasFillRule = definedExternally): Boolean\n  fun isPointInStroke(x: Double, y:

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Double): Boolean\n fun isPointInStroke(path: Path2D, x: Double, y: Double): Boolean\n}\n\npublic external
interface CanvasUserInterface {\n fun drawFocusIfNeeded(element: Element)\n fun drawFocusIfNeeded(path:
Path2D, element: Element)\n fun scrollPathIntoView()\n fun scrollPathIntoView(path: Path2D)\n}\n\npublic
external interface CanvasText {\n fun fillText(text: String, x: Double, y: Double, maxWidth: Double =
definedExternally)\n fun strokeText(text: String, x: Double, y: Double, maxWidth: Double = definedExternally)\n
fun measureText(text: String): TextMetrics\n}\n\npublic external interface CanvasDrawImage {\n fun
drawImage(image: CanvasImageSource, dx: Double, dy: Double)\n fun drawImage(image: CanvasImageSource,
dx: Double, dy: Double, dw: Double, dh: Double)\n fun drawImage(image: CanvasImageSource, sx: Double, sy:
Double, sw: Double, sh: Double, dx: Double, dy: Double, dw: Double, dh: Double)\n}\n\npublic external interface
CanvasHitRegion {\n fun addHitRegion(options: HitRegionOptions = definedExternally)\n fun
removeHitRegion(id: String)\n fun clearHitRegions()\n}\n\npublic external interface CanvasImageData {\n fun
createImageData(sw: Double, sh: Double): ImageData\n fun createImageData(imagedata: ImageData):
ImageData\n fun getImageData(sx: Double, sy: Double, sw: Double, sh: Double): ImageData\n fun
putImageData(imagedata: ImageData, dx: Double, dy: Double)\n fun putImageData(imagedata: ImageData, dx:
Double, dy: Double, dirtyX: Double, dirtyY: Double, dirtyWidth: Double, dirtyHeight: Double)\n}\n\npublic
external interface CanvasPathDrawingStyles {\n var lineWidth: Double\n var lineCap: CanvasLineCap\n var
lineJoin: CanvasLineJoin\n var miterLimit: Double\n var lineDashOffset: Double\n fun setLineDash(segments:
Array<Double>)\n fun getLineDash(): Array<Double>\n}\n\npublic external interface CanvasTextDrawingStyles
{\n var font: String\n var textAlign: CanvasTextAlign\n var textBaseline: CanvasTextBaseline\n var
direction: CanvasDirection\n}\n\npublic external interface CanvasPath {\n fun closePath()\n fun moveTo(x:
Double, y: Double)\n fun.lineTo(x: Double, y: Double)\n fun quadraticCurveTo(cpx: Double, cpy: Double, x:
Double, y: Double)\n fun bezierCurveTo(cp1x: Double, cp1y: Double, cp2x: Double, cp2y: Double, x: Double, y:
Double)\n fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radius: Double)\n fun arcTo(x1: Double,
y1: Double, x2: Double, y2: Double, radiusX: Double, radiusY: Double, rotation: Double)\n fun rect(x: Double, y:
Double, w: Double, h: Double)\n fun arc(x: Double, y: Double, radius: Double, startAngle: Double, endAngle:
Double, anticlockwise: Boolean = definedExternally)\n fun ellipse(x: Double, y: Double, radiusX: Double,
radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean =
definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[CanvasGradient](https://developer.mozilla.org/en/docs/Web/API/CanvasGradient) to Kotlin\n */\n\npublic external
abstract class CanvasGradient {\n fun addColorStop(offset: Double, color: String)\n}\n\n/**\n * Exposes the
JavaScript [CanvasPattern](https://developer.mozilla.org/en/docs/Web/API/CanvasPattern) to Kotlin\n */\n\npublic
external abstract class CanvasPattern {\n fun setTransform(transform: dynamic = definedExternally)\n}\n\n/**\n *
Exposes the JavaScript [TextMetrics](https://developer.mozilla.org/en/docs/Web/API/TextMetrics) to Kotlin\n
*/\n\npublic external abstract class TextMetrics {\n open val width: Double\n open val actualBoundingBoxLeft:
Double\n open val actualBoundingBoxRight: Double\n open val fontBoundingBoxAscent: Double\n open val
fontBoundingBoxDescent: Double\n open val actualBoundingBoxAscent: Double\n open val
actualBoundingBoxDescent: Double\n open val emHeightAscent: Double\n open val emHeightDescent:
Double\n open val hangingBaseline: Double\n open val alphabeticBaseline: Double\n open val
ideographicBaseline: Double\n}\n\npublic external interface HitRegionOptions {\n var path: Path2D? /* = null
*/\n get() = definedExternally\n set(value) = definedExternally\n var fillRule: CanvasFillRule? /* =
CanvasFillRule.NONZERO */\n get() = definedExternally\n set(value) = definedExternally\n var id:
String? /* = \"\" */\n get() = definedExternally\n set(value) = definedExternally\n var parentID: String? /* =
null */\n get() = definedExternally\n set(value) = definedExternally\n var cursor: String? /* = \"inherit\"
*/\n get() = definedExternally\n set(value) = definedExternally\n var control: Element? /* = null */\n
get() = definedExternally\n set(value) = definedExternally\n var label: String? /* = null */\n get() =
definedExternally\n set(value) = definedExternally\n var role: String? /* = null */\n get() =
definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun HitRegionOptions(path: Path2D? =

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null, fillRule: CanvasFillRule? = CanvasFillRule.NONZERO, id: String? = "", parentID: String? = null, cursor:
String? = "inherit", control: Element? = null, label: String? = null, role: String? = null): HitRegionOptions {
    val o = js("{}")
    o["path"] = path
    o["fillRule"] = fillRule
    o["id"] = id
    o["parentID"] = parentID
    o["cursor"] = cursor
    o["control"] = control
    o["label"] = label
    o["role"] = role
    return o
}

Exposes the JavaScript [ImageData](https://developer.mozilla.org/en/docs/Web/API/ImageData) to Kotlin
public external open class ImageData : ImageBitmapSource, TexImageSource {
    constructor(sw: Int, sh: Int)
    constructor(data: Uint8ClampedArray, sw: Int, sh: Int = definedExternally)
    open val width: Int
    open val height: Int
    open val data: Uint8ClampedArray
}

Exposes the JavaScript [Path2D](https://developer.mozilla.org/en/docs/Web/API/Path2D) to Kotlin
public external open class Path2D() : CanvasPath {
    constructor(path: Path2D)
    constructor(paths: Array<Path2D>, fillRule: CanvasFillRule = definedExternally)
    constructor(d: String)
    fun addPath(path: Path2D, transform: dynamic = definedExternally)
    override fun closePath()
    override fun moveTo(x: Double, y: Double)
    override fun lineTo(x: Double, y: Double)
    override fun quadraticCurveTo(cpx: Double, cpy: Double, x: Double, y: Double)
    override fun bezierCurveTo(cp1x: Double, cp1y: Double, cp2x: Double, cp2y: Double, x: Double, y: Double)
    override fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radius: Double)
    override fun arcTo(x1: Double, y1: Double, x2: Double, y2: Double, radiusX: Double, radiusY: Double, rotation: Double)
    override fun rect(x: Double, y: Double, w: Double, h: Double)
    override fun arc(x: Double, y: Double, radius: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean /* = definedExternally */)
    override fun ellipse(x: Double, y: Double, radiusX: Double, radiusY: Double, rotation: Double, startAngle: Double, endAngle: Double, anticlockwise: Boolean /* = definedExternally */)
}

Exposes the JavaScript [ImageBitmapRenderingContext](https://developer.mozilla.org/en/docs/Web/API/ImageBitmapRenderingContext) to Kotlin
public external abstract class ImageBitmapRenderingContext {
    open val canvas: HTMLCanvasElement
    fun transferFromImageBitmap(bitmap: ImageBitmap?)
}

public external interface ImageBitmapRenderingContextSettings {
    var alpha: Boolean? /* = true */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun ImageBitmapRenderingContextSettings(alpha: Boolean? = true): ImageBitmapRenderingContextSettings {
    val o = js("{}")
    o["alpha"] = alpha
    return o
}

Exposes the JavaScript [CustomElementRegistry](https://developer.mozilla.org/en/docs/Web/API/CustomElementRegistry) to Kotlin
public external abstract class CustomElementRegistry {
    fun define(name: String, constructor: () -> dynamic, options: ElementDefinitionOptions = definedExternally)
    fun get(name: String): Any?
    fun whenDefined(name: String): Promise<Unit>
}

public external interface ElementDefinitionOptions {
    var extends: String?
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun ElementDefinitionOptions(extends: String? = undefined): ElementDefinitionOptions {
    val o = js("{}")
    o["extends"] = extends
    return o
}

public external interface ElementContentEditable {
    var contentEditable: String
    val isContentEditable: Boolean
}

Exposes the JavaScript [DataTransfer](https://developer.mozilla.org/en/docs/Web/API/DataTransfer) to Kotlin
public external abstract class DataTransfer {
    open var dropEffect: String
    open var effectAllowed: String
    open val items: DataTransferItemList
    open val types: Array<out String>
    open val files: FileList
    fun setDragImage(image: Element, x: Int, y: Int)
    fun getData(format: String): String
    fun setData(format: String, data: String)
    fun clearData(format: String = definedExternally)
}

Exposes the JavaScript [DataTransferItemList](https://developer.mozilla.org/en/docs/Web/API/DataTransferItemList) to Kotlin
public external abstract class DataTransferItemList {
    open val length: Int
    fun add(data: String, type: String): DataTransferItem?
    fun add(data: File): DataTransferItem?
    fun remove(index: Int)
    fun clear()
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline operator fun

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DataTransferItemList.get(index: Int): DataTransferItem? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[DataTransferItem](https://developer.mozilla.org/en/docs/Web/API/DataTransferItem) to Kotlin\n\n^/npublic
external abstract class DataTransferItem {\n  open val kind: String\n  open val type: String\n  fun
getAsString(_callback: ((String) -> Unit)?)\n  fun getAsFile(): File?\n}\n\n/**\n * Exposes the JavaScript
[DragEvent](https://developer.mozilla.org/en/docs/Web/API/DragEvent) to Kotlin\n\n^/npublic external open class
DragEvent(type: String, eventInitDict: DragEventInit = definedExternally) : MouseEvent {\n  open val
dataTransfer: DataTransfer?\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE:
Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface
DragEventInit : MouseEventInit {\n  var dataTransfer: DataTransfer? /* = null */\n  get() = definedExternally\n
  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun DragEventInit(dataTransfer:
DataTransfer? = null, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0,
buttons: Short? = 0, relatedTarget: EventTarget? = null, region: String? = null, ctrlKey: Boolean? = false, shiftKey:
Boolean? = false, altKey: Boolean? = false, metaKey: Boolean? = false, modifierAltGraph: Boolean? = false,
modifierCapsLock: Boolean? = false, modifierFn: Boolean? = false, modifierFnLock: Boolean? = false,
modifierHyper: Boolean? = false, modifierNumLock: Boolean? = false, modifierScrollLock: Boolean? = false,
modifierSuper: Boolean? = false, modifierSymbol: Boolean? = false, modifierSymbolLock: Boolean? = false, view:
Window? = null, detail: Int? = 0, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): DragEventInit {\n  val o = js("{}")\n  o["dataTransfer"] = dataTransfer\n  o["screenX"] = screenX\n
  o["screenY"] = screenY\n  o["clientX"] = clientX\n  o["clientY"] = clientY\n  o["button"] = button\n
  o["buttons"] = buttons\n  o["relatedTarget"] = relatedTarget\n  o["region"] = region\n  o["ctrlKey"] =
ctrlKey\n  o["shiftKey"] = shiftKey\n  o["altKey"] = altKey\n  o["metaKey"] = metaKey\n
  o["modifierAltGraph"] = modifierAltGraph\n  o["modifierCapsLock"] = modifierCapsLock\n
  o["modifierFn"] = modifierFn\n  o["modifierFnLock"] = modifierFnLock\n  o["modifierHyper"] =
modifierHyper\n  o["modifierNumLock"] = modifierNumLock\n  o["modifierScrollLock"] =
modifierScrollLock\n  o["modifierSuper"] = modifierSuper\n  o["modifierSymbol"] = modifierSymbol\n
  o["modifierSymbolLock"] = modifierSymbolLock\n  o["view"] = view\n  o["detail"] = detail\n
  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return
o\n}\n\n/**\n * Exposes the JavaScript [Window](https://developer.mozilla.org/en/docs/Web/API/Window) to
Kotlin\n\n^/npublic external abstract class Window : EventTarget, GlobalEventHandlers, WindowEventHandlers,
WindowOrWorkerGlobalScope, WindowSessionStorage, WindowLocalStorage, GlobalPerformance,
UnionMessagePortOrWindowProxy {\n  open val window: Window\n  open val self: Window\n  open val
document: Document\n  open var name: String\n  open val location: Location\n  open val history: History\n
  open val customElements: CustomElementRegistry\n  open val locationbar: BarProp\n  open val menubar:
BarProp\n  open val personalbar: BarProp\n  open val scrollbars: BarProp\n  open val statusbar: BarProp\n
  open val toolbar: BarProp\n  open var status: String\n  open val closed: Boolean\n  open val frames: Window\n
  open val length: Int\n  open val top: Window\n  open var opener: Any?\n  open val parent: Window\n  open val
frameElement: Element?\n  open val navigator: Navigator\n  open val applicationCache: ApplicationCache\n
  open val external: External\n  open val screen: Screen\n  open val innerWidth: Int\n  open val innerHeight: Int\n
  open val scrollX: Double\n  open val pageXOffset: Double\n  open val scrollY: Double\n  open val
pageYOffset: Double\n  open val screenX: Int\n  open val screenY: Int\n  open val outerWidth: Int\n  open val
outerHeight: Int\n  open val devicePixelRatio: Double\n  fun close()\n  fun stop()\n  fun focus()\n  fun blur()\n
  fun open(url: String = definedExternally, target: String = definedExternally, features: String = definedExternally):
Window?\n  fun alert()\n  fun alert(message: String)\n  fun confirm(message: String = definedExternally):
Boolean\n  fun prompt(message: String = definedExternally, default: String = definedExternally): String?\n  fun
print()\n  fun requestAnimationFrame(callback: (Double) -> Unit): Int\n  fun cancelAnimationFrame(handle:
Int)\n  fun postMessage(message: Any?, targetOrigin: String, transfer: Array<dynamic> = definedExternally)\n
  fun captureEvents()\n  fun releaseEvents()\n  fun matchMedia(query: String): MediaQueryList\n  fun moveTo(x:

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Int, y: Int)\n fun moveBy(x: Int, y: Int)\n fun resizeTo(x: Int, y: Int)\n fun resizeBy(x: Int, y: Int)\n fun
scroll(options: ScrollToOptions = definedExternally)\n fun scroll(x: Double, y: Double)\n fun scrollTo(options:
ScrollToOptions = definedExternally)\n fun scrollTo(x: Double, y: Double)\n fun scrollBy(options:
ScrollToOptions = definedExternally)\n fun scrollBy(x: Double, y: Double)\n fun getComputedStyle(elt:
Element, pseudoElt: String? = definedExternally):
CSSStyleDeclaration\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Window.get(name: String):
dynamic = asDynamic()[name]\n\npublic external abstract class BarProp {\n open val visible: Boolean\n}\n\n/**\n * Exposes the JavaScript [History](https://developer.mozilla.org/en/docs/Web/API/History) to Kotlin\n *\npublic
external abstract class History {\n open val length: Int\n open var scrollRestoration: ScrollRestoration\n open
val state: Any?\n fun go(delta: Int = definedExternally)\n fun back()\n fun forward()\n fun pushState(data:
Any?, title: String, url: String? = definedExternally)\n fun replaceState(data: Any?, title: String, url: String? =
definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[Location](https://developer.mozilla.org/en/docs/Web/API/Location) to Kotlin\n *\npublic external abstract class
Location {\n open var href: String\n open val origin: String\n open var protocol: String\n open var host:
String\n open var hostname: String\n open var port: String\n open var pathname: String\n open var search:
String\n open var hash: String\n open val ancestorOrigins: Array<out String>\n fun assign(url: String)\n fun
replace(url: String)\n fun reload()\n}\n\n/**\n * Exposes the JavaScript
[PopStateEvent](https://developer.mozilla.org/en/docs/Web/API/PopStateEvent) to Kotlin\n *\npublic external
open class PopStateEvent(type: String, eventInitDict: PopStateEventInit = definedExternally) : Event {\n open val
state: Any?\n\n companion object {\n val NONE: Short\n val CAPTURING_PHASE: Short\n val
AT_TARGET: Short\n val BUBBLING_PHASE: Short\n }\n}\n\npublic external interface PopStateEventInit
: EventInit {\n var state: Any? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun PopStateEventInit(state: Any? = null,
bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PopStateEventInit {\n val o
= js(\"({})\")\n o[\"state\"] = state\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n
o[\"composed\"] = composed\n return o\n}\n\n/**\n * Exposes the JavaScript
[HashChangeEvent](https://developer.mozilla.org/en/docs/Web/API/HashChangeEvent) to Kotlin\n *\npublic
external open class HashChangeEvent(type: String, eventInitDict: HashChangeEventInit = definedExternally) :
Event {\n open val oldURL: String\n open val newURL: String\n\n companion object {\n val NONE:
Short\n val CAPTURING_PHASE: Short\n val AT_TARGET: Short\n val BUBBLING_PHASE:
Short\n }\n}\n\npublic external interface HashChangeEventInit : EventInit {\n var oldURL: String? /* = \"\" */\n
get() = definedExternally\n set(value) = definedExternally\n var newURL: String? /* = \"\" */\n get() =
definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun HashChangeEventInit(oldURL:
String? = \"\", newURL: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): HashChangeEventInit {\n val o = js(\"({})\")\n o[\"oldURL\"] = oldURL\n o[\"newURL\"]
= newURL\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n
return o\n}\n\n/**\n * Exposes the JavaScript
[PageTransitionEvent](https://developer.mozilla.org/en/docs/Web/API/PageTransitionEvent) to Kotlin\n *\npublic
external open class PageTransitionEvent(type: String, eventInitDict: PageTransitionEventInit = definedExternally) :
Event {\n open val persisted: Boolean\n\n companion object {\n val NONE: Short\n val
CAPTURING_PHASE: Short\n val AT_TARGET: Short\n val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface PageTransitionEventInit : EventInit {\n var persisted: Boolean? /* = false */\n
get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun PageTransitionEventInit(persisted:
Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):

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PageTransitionEventInit {\n  val o = js("{}")\n  o["persisted"] = persisted\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript [BeforeUnloadEvent](https://developer.mozilla.org/en/docs/Web/API/BeforeUnloadEvent) to Kotlin\n */\npublic external open class BeforeUnloadEvent : Event {\n  var returnValue: String\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external abstract class ApplicationCache : EventTarget {\n  open val status: Short\n  open var onchecking: ((Event) -> dynamic)?\n  open var onerror: ((Event) -> dynamic)?\n  open var onnoupdate: ((Event) -> dynamic)?\n  open var ondownloading: ((Event) -> dynamic)?\n  open var onprogress: ((ProgressEvent) -> dynamic)?\n  open var onupdateready: ((Event) -> dynamic)?\n  open var oncached: ((Event) -> dynamic)?\n  open var onobsolete: ((Event) -> dynamic)?\n  fun update()\n  fun abort()\n  fun swapCache()\n\n  companion object {\n    val UNCACHED: Short\n    val IDLE: Short\n    val CHECKING: Short\n    val DOWNLOADING: Short\n    val UPDATEREADY: Short\n    val OBSOLETE: Short\n  }\n}\n\n/**\n * Exposes the JavaScript [NavigatorOnLine](https://developer.mozilla.org/en/docs/Web/API/NavigatorOnLine) to Kotlin\n */\npublic external interface NavigatorOnLine {\n  val onLine: Boolean\n}\n\n/**\n * Exposes the JavaScript [ErrorEvent](https://developer.mozilla.org/en/docs/Web/API/ErrorEvent) to Kotlin\n */\npublic external open class ErrorEvent(type: String, eventInitDict: ErrorEventInit = definedExternally) : Event {\n  open val message: String\n  open val filename: String\n  open val lineno: Int\n  open val colno: Int\n  open val error: Any?\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface ErrorEventInit : EventInit {\n  var message: String? /* = "" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var filename: String? /* = "" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var lineno: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var colno: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var error: Any? /* = null */\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ErrorEventInit(message: String? = "", filename: String? = "", lineno: Int? = 0, colno: Int? = 0, error: Any? = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ErrorEventInit {\n  val o = js("{}")\n  o["message"] = message\n  o["filename"] = filename\n  o["lineno"] = lineno\n  o["colno"] = colno\n  o["error"] = error\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript [PromiseRejectionEvent](https://developer.mozilla.org/en/docs/Web/API/PromiseRejectionEvent) to Kotlin\n */\npublic external open class PromiseRejectionEvent(type: String, eventInitDict: PromiseRejectionEventInit) : Event {\n  open val promise: Promise<Any?>\n  open val reason: Any?\n\n  companion object {\n    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface PromiseRejectionEventInit : EventInit {\n  var promise: Promise<Any?>?\n  var reason: Any?\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun PromiseRejectionEventInit(promise: Promise<Any?>?, reason: Any? = undefined, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PromiseRejectionEventInit {\n  val o = js("{}")\n  o["promise"] = promise\n  o["reason"] = reason\n  o["bubbles"] = bubbles\n  o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript [GlobalEventHandlers](https://developer.mozilla.org/en/docs/Web/API/GlobalEventHandlers) to Kotlin\n */\npublic external interface GlobalEventHandlers {\n  var onabort: ((Event) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var onblur: ((FocusEvent) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var oncancel: ((Event) -> dynamic)?\n  get() = definedExternally\n  set(value) = definedExternally\n  var oncanplay: ((Event) -> dynamic)?\n  get() =

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definedExternally\n      set(value) = definedExternally\n      var oncanplaythrough: ((Event) -> dynamic)?\n      get()
= definedExternally\n      set(value) = definedExternally\n      var onchange: ((Event) -> dynamic)?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var onclick: ((MouseEvent) -> dynamic)?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var onclose: ((Event) -> dynamic)?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var oncontextmenu: ((MouseEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var oncuechange: ((Event) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondblclick: ((MouseEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondrag: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragend: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragenter: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragexit: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragleave: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragover: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondragstart: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondrop: ((DragEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var ondurationchange: ((Event) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var onemptied: ((Event) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var onended: ((Event) -> dynamic)?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var onerror: ((dynamic, String, Int, Int, Any?) ->
dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var onfocus: ((FocusEvent) ->
dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var oninput: ((InputEvent) ->
dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var oninvalid: ((Event) ->
dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var onkeydown:
((KeyboardEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var
onkeypress: ((KeyboardEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n
var onkeyup: ((KeyboardEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) =
definedExternally\n      var onload: ((Event) -> dynamic)?\n      get() = definedExternally\n      set(value) =
definedExternally\n      var onloadeddata: ((Event) -> dynamic)?\n      get() = definedExternally\n      set(value) =
definedExternally\n      var onloadedmetadata: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onloadend: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onloadstart: ((ProgressEvent) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onmousedown: ((MouseEvent) -> dynamic)?\n      get() =
definedExternally\n      set(value) = definedExternally\n      var onmouseenter: ((MouseEvent) -> dynamic)?\n
get() = definedExternally\n      set(value) = definedExternally\n      var onmouseleave: ((MouseEvent) ->
dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var onmousemove:
((MouseEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n      var
onmouseout: ((MouseEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) = definedExternally\n
var onmouseover: ((MouseEvent) -> dynamic)?\n      get() = definedExternally\n      set(value) =
definedExternally\n      var onmouseup: ((MouseEvent) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onwheel: ((WheelEvent) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onpause: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onplay: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onplaying: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onprogress: ((ProgressEvent) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onratechange: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onreset: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onresize: ((Event) -> dynamic)?\n      get() = definedExternally\n
set(value) = definedExternally\n      var onscroll: ((Event) -> dynamic)?\n      get() = definedExternally\n

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set(value) = definedExternally\n    var onseeked: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onseeking: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onselect: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onshow: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onstalled: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onsubmit: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onsuspend: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var ontimeupdate: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var ontoggle: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onvolumechange: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onwaiting: ((Event) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var ongotpointercapture: ((PointerEvent) -> dynamic)?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var onlostpointercapture: ((PointerEvent) -> dynamic)?\n
        get() = definedExternally\n    set(value) = definedExternally\n    var onpointerdown: ((PointerEvent) ->
dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var onpointermove:
((PointerEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var
onpointerup: ((PointerEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n
var onpointercancel: ((PointerEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n    var onpointerover: ((PointerEvent) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onpointerout: ((PointerEvent) -> dynamic)?\n        get() = definedExternally\n
        set(value) = definedExternally\n    var onpointerenter: ((PointerEvent) -> dynamic)?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var onpointerleave: ((PointerEvent) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n}\n\n**\n * Exposes the JavaScript
[WindowEventHandlers](https://developer.mozilla.org/en/docs/Web/API/WindowEventHandlers) to Kotlin\n
*\npublic external interface WindowEventHandlers {\n    var onafterprint: ((Event) -> dynamic)?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var onbeforeprint: ((Event) -> dynamic)?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var onbeforeunload: ((BeforeUnloadEvent) ->
String)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var onhashchange:
((HashChangeEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var
onlanguagechange: ((Event) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n
var onmessage: ((MessageEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n    var onoffline: ((Event) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n    var ononline: ((Event) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n    var onpagehide: ((PageTransitionEvent) -> dynamic)?\n        get() = definedExternally\n
set(value) = definedExternally\n    var onpageshow: ((PageTransitionEvent) -> dynamic)?\n        get() =
definedExternally\n    set(value) = definedExternally\n    var onpopstate: ((PopStateEvent) -> dynamic)?\n
get() = definedExternally\n    set(value) = definedExternally\n    var onrejectionhandled: ((Event) -> dynamic)?\n
        get() = definedExternally\n    set(value) = definedExternally\n    var onstorage: ((StorageEvent) -> dynamic)?\n
        get() = definedExternally\n    set(value) = definedExternally\n    var onunhandledrejection:
((PromiseRejectionEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n
var onunload: ((Event) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n}\n\npublic external interface DocumentAndElementEventHandlers {\n    var oncopy:
((ClipboardEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var oncut:
((ClipboardEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) = definedExternally\n    var
onpaste: ((ClipboardEvent) -> dynamic)?\n        get() = definedExternally\n    set(value) =
definedExternally\n}\n\n**\n * Exposes the JavaScript
[WindowOrWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WindowOrWorkerGlobalScope)
to Kotlin\n
*\npublic external interface WindowOrWorkerGlobalScope {\n    val origin: String\n    val caches:

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CacheStorage\n fun btoa(data: String): String\n fun atob(data: String): String\n fun setTimeout(handler:
dynamic, timeout: Int = definedExternally, vararg arguments: Any?): Int\n fun clearTimeout(handle: Int =
definedExternally)\n fun setInterval(handler: dynamic, timeout: Int = definedExternally, vararg arguments: Any?):
Int\n fun clearInterval(handle: Int = definedExternally)\n fun createImageBitmap(image: ImageBitmapSource,
options: ImageBitmapOptions = definedExternally): Promise<ImageBitmap>\n fun createImageBitmap(image:
ImageBitmapSource, sx: Int, sy: Int, sw: Int, sh: Int, options: ImageBitmapOptions = definedExternally):
Promise<ImageBitmap>\n fun fetch(input: dynamic, init: RequestInit = definedExternally):
Promise<Response>\n}\n\n/**\n * Exposes the JavaScript
[Navigator](https://developer.mozilla.org/en/docs/Web/API/Navigator) to Kotlin\n *\npublic external abstract class
Navigator : NavigatorID, NavigatorLanguage, NavigatorOnLine, NavigatorContentUtils, NavigatorCookies,
NavigatorPlugins, NavigatorConcurrentHardware {\n open val clipboard: Clipboard\n open val mediaDevices:
MediaDevices\n open val maxTouchPoints: Int\n open val serviceWorker: ServiceWorkerContainer\n fun
requestMediaKeySystemAccess(keySystem: String, supportedConfigurations:
Array<MediaKeySystemConfiguration>): Promise<MediaKeySystemAccess>\n fun getUserMedia(constraints:
MediaStreamConstraints, successCallback: (MediaStream) -> Unit, errorCallback: (dynamic) -> Unit)\n fun
vibrate(pattern: dynamic): Boolean\n}\n\n/**\n * Exposes the JavaScript
[NavigatorID](https://developer.mozilla.org/en/docs/Web/API/NavigatorID) to Kotlin\n *\npublic external interface
NavigatorID {\n val appCodeName: String\n val appName: String\n val appVersion: String\n val platform:
String\n val product: String\n val productSub: String\n val userAgent: String\n val vendor: String\n val
vendorSub: String\n val oscpu: String\n fun taintEnabled(): Boolean\n}\n\n/**\n * Exposes the JavaScript
[NavigatorLanguage](https://developer.mozilla.org/en/docs/Web/API/NavigatorLanguage) to Kotlin\n *\npublic
external interface NavigatorLanguage {\n val language: String\n val languages: Array<out String>\n}\n\npublic
external interface NavigatorContentUtils {\n fun registerProtocolHandler(scheme: String, url: String, title:
String)\n fun registerContentHandler(mimeType: String, url: String, title: String)\n fun
isProtocolHandlerRegistered(scheme: String, url: String): String\n fun isContentHandlerRegistered(mimeType:
String, url: String): String\n fun unregisterProtocolHandler(scheme: String, url: String)\n fun
unregisterContentHandler(mimeType: String, url: String)\n}\n\npublic external interface NavigatorCookies {\n val
cookieEnabled: Boolean\n}\n\n/**\n * Exposes the JavaScript
[NavigatorPlugins](https://developer.mozilla.org/en/docs/Web/API/NavigatorPlugins) to Kotlin\n *\npublic
external interface NavigatorPlugins {\n val plugins: PluginArray\n val mimeTypes: MimeTypeArray\n fun
javaEnabled(): Boolean\n}\n\n/**\n * Exposes the JavaScript
[PluginArray](https://developer.mozilla.org/en/docs/Web/API/PluginArray) to Kotlin\n *\npublic external abstract
class PluginArray : ItemArrayLike<Plugin> {\n fun refresh(reload: Boolean = definedExternally)\n override fun
item(index: Int): Plugin?\n fun namedItem(name: String):
Plugin?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun PluginArray.get(index: Int):
Plugin? = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun PluginArray.get(name:
String): Plugin? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript
[MimeTypeArray](https://developer.mozilla.org/en/docs/Web/API/MimeTypeArray) to Kotlin\n *\npublic external
abstract class MimeTypeArray : ItemArrayLike<MimeType> {\n override fun item(index: Int): MimeType?\n
fun namedItem(name: String): MimeType?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun MimeTypeArray.get(index:
Int): MimeType? = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun MimeTypeArray.get(name:
String): MimeType? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript
[Plugin](https://developer.mozilla.org/en/docs/Web/API/Plugin) to Kotlin\n *\npublic external abstract class Plugin
: ItemArrayLike<MimeType> {\n open val name: String\n open val description: String\n open val filename:

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String\n  override fun item(index: Int): MimeTypes\n  fun namedItem(name: String):
MimeTypes\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Plugin.get(index: Int):
MimeTypes? = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Plugin.get(name: String):
MimeTypes? = asDynamic()[name]\n\n/**\n * Exposes the JavaScript
[MimeTypes](https://developer.mozilla.org/en/docs/Web/API/MimeTypes) to Kotlin\n *\npublic external abstract
class MimeTypes {\n  open val type: String\n  open val description: String\n  open val suffixes: String\n  open
val enabledPlugin: Plugin\n}\n\n/**\n * Exposes the JavaScript
[ImageBitmap](https://developer.mozilla.org/en/docs/Web/API/ImageBitmap) to Kotlin\n *\npublic external
abstract class ImageBitmap : CanvasImageSource, TexImageSource {\n  open val width: Int\n  open val height:
Int\n  fun close()\n}\n\npublic external interface ImageBitmapOptions {\n  var imageOrientation:
ImageOrientation? /* = ImageOrientation.NONE */\n  get() = definedExternally\n  set(value) =
definedExternally\n  var premultiplyAlpha: PremultiplyAlpha? /* = PremultiplyAlpha.DEFAULT */\n  get() =
definedExternally\n  set(value) = definedExternally\n  var colorSpaceConversion: ColorSpaceConversion? /* =
ColorSpaceConversion.DEFAULT */\n  get() = definedExternally\n  set(value) = definedExternally\n  var
resizeWidth: Int?\n  get() = definedExternally\n  set(value) = definedExternally\n  var resizeHeight: Int?\n
  get() = definedExternally\n  set(value) = definedExternally\n  var resizeQuality: ResizeQuality? /* =
ResizeQuality.LOW */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun
ImageBitmapOptions(imageOrientation: ImageOrientation? = ImageOrientation.NONE, premultiplyAlpha:
PremultiplyAlpha? = PremultiplyAlpha.DEFAULT, colorSpaceConversion: ColorSpaceConversion? =
ColorSpaceConversion.DEFAULT, resizeWidth: Int? = undefined, resizeHeight: Int? = undefined, resizeQuality:
ResizeQuality? = ResizeQuality.LOW): ImageBitmapOptions {\n  val o = js(\"({})\")\n  o[\"imageOrientation\"]
= imageOrientation\n  o[\"premultiplyAlpha\"] = premultiplyAlpha\n  o[\"colorSpaceConversion\"] =
colorSpaceConversion\n  o[\"resizeWidth\"] = resizeWidth\n  o[\"resizeHeight\"] = resizeHeight\n
o[\"resizeQuality\"] = resizeQuality\n  return o\n}\n\n/**\n * Exposes the JavaScript
[MessageEvent](https://developer.mozilla.org/en/docs/Web/API/MessageEvent) to Kotlin\n *\npublic external open
class MessageEvent(type: String, eventInitDict: MessageEventInit = definedExternally) : Event {\n  open val data:
Any?\n  open val origin: String\n  open val lastEventId: String\n  open val source:
UnionMessagePortOrWindowProxy?\n  open val ports: Array<out MessagePort>\n  fun initMessageEvent(type:
String, bubbles: Boolean, cancelable: Boolean, data: Any?, origin: String, lastEventId: String, source:
UnionMessagePortOrWindowProxy?, ports: Array<MessagePort>)\n\n  companion object {\n    val NONE:
Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE:
Short\n  }\n}\n\npublic external interface MessageEventInit : EventInit {\n  var data: Any? /* = null */\n  get()
= definedExternally\n  set(value) = definedExternally\n  var origin: String? /* = \"\" */\n  get() =
definedExternally\n  set(value) = definedExternally\n  var lastEventId: String? /* = \"\" */\n  get() =
definedExternally\n  set(value) = definedExternally\n  var source: UnionMessagePortOrWindowProxy? /* =
null */\n  get() = definedExternally\n  set(value) = definedExternally\n  var ports: Array<MessagePort>? /*
= arrayOf() */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MessageEventInit(data: Any? = null,
origin: String? = \"\", lastEventId: String? = \"\", source: UnionMessagePortOrWindowProxy? = null, ports:
Array<MessagePort>? = arrayOf(), bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): MessageEventInit {\n  val o = js(\"({})\")\n  o[\"data\"] = data\n  o[\"origin\"] = origin\n
o[\"lastEventId\"] = lastEventId\n  o[\"source\"] = source\n  o[\"ports\"] = ports\n  o[\"bubbles\"] = bubbles\n
o[\"cancelable\"] = cancelable\n  o[\"composed\"] = composed\n  return o\n}\n\n/**\n * Exposes the JavaScript

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[EventSource](https://developer.mozilla.org/en/docs/Web/API/EventSource) to Kotlin\n \*\\npublic external open class EventSource(url: String, eventSourceInitDict: EventSourceInit = definedExternally) : EventTarget {\n open val url: String\n open val withCredentials: Boolean\n open val readyState: Short\n var onopen: ((Event) -> dynamic)?\n var onmessage: ((MessageEvent) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n fun close()\n\n companion object {\n val CONNECTING: Short\n val OPEN: Short\n val CLOSED: Short\n }\n}\n\npublic external interface EventSourceInit {\n var withCredentials: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun EventSourceInit(withCredentials: Boolean? = false): EventSourceInit {\n val o = js(\"({})\")\n o[\"withCredentials\"] = withCredentials\n return o\n}\n\n/\*\*\n \* Exposes the JavaScript [WebSocket](https://developer.mozilla.org/en/docs/Web/API/WebSocket) to Kotlin\n \*\npublic external open class WebSocket(url: String, protocols: dynamic = definedExternally) : EventTarget {\n open val url: String\n open val readyState: Short\n open val bufferedAmount: Number\n var onopen: ((Event) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n var onclose: ((Event) -> dynamic)?\n open val extensions: String\n open val protocol: String\n var onmessage: ((MessageEvent) -> dynamic)?\n var binaryType: BinaryType\n fun close(code: Short = definedExternally, reason: String = definedExternally)\n fun send(data: String)\n fun send(data: Blob)\n fun send(data: ArrayBuffer)\n fun send(data: ArrayBufferView)\n\n companion object {\n val CONNECTING: Short\n val OPEN: Short\n val CLOSING: Short\n val CLOSED: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript [CloseEvent](https://developer.mozilla.org/en/docs/Web/API/CloseEvent) to Kotlin\n \*\npublic external open class CloseEvent(type: String, eventInitDict: CloseEventInit = definedExternally) : Event {\n open val wasClean: Boolean\n open val code: Short\n open val reason: String\n\n companion object {\n val NONE: Short\n val CAPTURING\_PHASE: Short\n val AT\_TARGET: Short\n val BUBBLING\_PHASE: Short\n }\n}\n\npublic external interface CloseEventInit : EventInit {\n var wasClean: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var code: Short? /\* = 0 \*/\n get() = definedExternally\n set(value) = definedExternally\n var reason: String? /\* = \"\" \*/\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CloseEventInit(wasClean: Boolean? = false, code: Short? = 0, reason: String? = \"\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): CloseEventInit {\n val o = js(\"({})\")\n o[\"wasClean\"] = wasClean\n o[\"code\"] = code\n o[\"reason\"] = reason\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n o[\"composed\"] = composed\n return o\n}\n\n/\*\*\n \* Exposes the JavaScript [MessageChannel](https://developer.mozilla.org/en/docs/Web/API/MessageChannel) to Kotlin\n \*\npublic external open class MessageChannel {\n open val port1: MessagePort\n open val port2: MessagePort\n}\n\n/\*\*\n \* Exposes the JavaScript [MessagePort](https://developer.mozilla.org/en/docs/Web/API/MessagePort) to Kotlin\n \*\npublic external abstract class MessagePort : EventTarget, UnionMessagePortOrWindowProxy, UnionMessagePortOrServiceWorker, UnionClientOrMessagePortOrServiceWorker {\n open var onmessage: ((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally)\n fun start()\n fun close()\n}\n\n/\*\*\n \* Exposes the JavaScript [BroadcastChannel](https://developer.mozilla.org/en/docs/Web/API/BroadcastChannel) to Kotlin\n \*\npublic external open class BroadcastChannel(name: String) : EventTarget {\n open val name: String\n var onmessage: ((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?)\n fun close()\n}\n\n/\*\*\n \* Exposes the JavaScript [WorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/WorkerGlobalScope) to Kotlin\n \*\npublic external abstract class WorkerGlobalScope : EventTarget, WindowOrWorkerGlobalScope, GlobalPerformance {\n open val self: WorkerGlobalScope\n open val location: WorkerLocation\n open val navigator: WorkerNavigator\n open var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n open var onlanguagechange: ((Event) -> dynamic)?\n open var onoffline: ((Event) -> dynamic)?\n open var ononline: ((Event) -> dynamic)?\n open var onrejectionhandled: ((Event) -> dynamic)?\n open var onunhandledrejection: ((PromiseRejectionEvent) -> dynamic)?\n fun importScripts(vararg urls: String)\n}\n\n/\*\*\n \* Exposes the

## JavaScript

[DedicatedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/DedicatedWorkerGlobalScope) to Kotlin\n \*\\npublic external abstract class DedicatedWorkerGlobalScope : WorkerGlobalScope {\n open var onmessage: ((MessageEvent) -> dynamic)?\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally)\n fun close()\n}\n\n/\*\*\n \* Exposes the JavaScript

[SharedWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/SharedWorkerGlobalScope) to Kotlin\n \*\\npublic external abstract class SharedWorkerGlobalScope : WorkerGlobalScope {\n open val name: String\n open val applicationCache: ApplicationCache\n open var onconnect: ((Event) -> dynamic)?\n fun close()\n}\n\n/\*\*\n \* Exposes the JavaScript

[AbstractWorker](https://developer.mozilla.org/en/docs/Web/API/AbstractWorker) to Kotlin\n \*\\npublic external interface AbstractWorker {\n var onerror: ((Event) -> dynamic)?\n get() = definedExternally\n set(value) = definedExternally\n}\n\n/\*\*\n \* Exposes the JavaScript

[Worker](https://developer.mozilla.org/en/docs/Web/API/Worker) to Kotlin\n \*\\npublic external open class Worker(scriptURL: String, options: WorkerOptions = definedExternally) : EventTarget, AbstractWorker {\n var onmessage: ((MessageEvent) -> dynamic)?\n override var onerror: ((Event) -> dynamic)?\n fun terminate()\n fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally)\n}\n\npublic external interface WorkerOptions {\n var type: WorkerType? /\* = WorkerType.CLASSIC \*/\n get() = definedExternally\n set(value) = definedExternally\n var credentials: RequestCredentials? /\* = RequestCredentials.OMIT \*/\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun WorkerOptions(type: WorkerType? = WorkerType.CLASSIC, credentials: RequestCredentials? = RequestCredentials.OMIT): WorkerOptions {\n val o = js(\"({})\")\n o[\"type\"] = type\n o[\"credentials\"] = credentials\n return o\n}\n\n/\*\*\n \* Exposes the JavaScript

[SharedWorker](https://developer.mozilla.org/en/docs/Web/API/SharedWorker) to Kotlin\n \*\\npublic external open class SharedWorker(scriptURL: String, name: String = definedExternally, options: WorkerOptions = definedExternally) : EventTarget, AbstractWorker {\n open val port: MessagePort\n override var onerror: ((Event) -> dynamic)?\n}\n\n/\*\*\n \* Exposes the JavaScript

[NavigatorConcurrentHardware](https://developer.mozilla.org/en/docs/Web/API/NavigatorConcurrentHardware) to Kotlin\n \*\\npublic external interface NavigatorConcurrentHardware {\n val hardwareConcurrency: Number\n}\n\n/\*\*\n \* Exposes the JavaScript

[WorkerNavigator](https://developer.mozilla.org/en/docs/Web/API/WorkerNavigator) to Kotlin\n \*\\npublic external abstract class WorkerNavigator : NavigatorID, NavigatorLanguage, NavigatorOnLine, NavigatorConcurrentHardware {\n open val serviceWorker: ServiceWorkerContainer\n}\n\n/\*\*\n \* Exposes the JavaScript

[WorkerLocation](https://developer.mozilla.org/en/docs/Web/API/WorkerLocation) to Kotlin\n \*\\npublic external abstract class WorkerLocation {\n open val href: String\n open val origin: String\n open val protocol: String\n open val host: String\n open val hostname: String\n open val port: String\n open val pathname: String\n open val search: String\n open val hash: String\n}\n\n/\*\*\n \* Exposes the JavaScript

[Storage](https://developer.mozilla.org/en/docs/Web/API/Storage) to Kotlin\n \*\\npublic external abstract class Storage {\n open val length: Int\n fun key(index: Int): String?\n fun removeItem(key: String)\n fun clear()\n fun getItem(key: String): String?\n fun setItem(key: String, value: String)\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Storage.get(key: String): String? = asDynamic()[key]\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun Storage.set(key: String, value: String) { asDynamic()[key] = value }\n\n/\*\*\n \* Exposes the JavaScript

[WindowSessionStorage](https://developer.mozilla.org/en/docs/Web/API/WindowSessionStorage) to Kotlin\n \*\\npublic external interface WindowSessionStorage {\n val sessionStorage: Storage\n}\n\n/\*\*\n \* Exposes the JavaScript

[WindowLocalStorage](https://developer.mozilla.org/en/docs/Web/API/WindowLocalStorage) to Kotlin\n \*\\npublic external interface WindowLocalStorage {\n val localStorage: Storage\n}\n\n/\*\*\n \* Exposes

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the JavaScript [StorageEvent](https://developer.mozilla.org/en/docs/Web/API/StorageEvent) to Kotlin\n *\n\npublic
external open class StorageEvent(type: String, eventInitDict: StorageEventInit = definedExternally) : Event {\n
open val key: String?\n open val oldValue: String?\n open val newValue: String?\n open val url: String\n
open val storageArea: Storage?\n\n companion object {\n val NONE: Short\n val CAPTURING_PHASE:
Short\n val AT_TARGET: Short\n val BUBBLING_PHASE: Short\n }\n\n\npublic external interface
StorageEventInit : EventInit {\n var key: String? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n var oldValue: String? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n var newValue: String? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n var url: String? /* = "" */\n get() = definedExternally\n set(value) =
definedExternally\n var storageArea: Storage? /* = null */\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun StorageEventInit(key: String? = null,
oldValue: String? = null, newValue: String? = null, url: String? = \"\", storageArea: Storage? = null, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): StorageEventInit {\n val o =
js(\"({})\")\n o[\"key\"] = key\n o[\"oldValue\"] = oldValue\n o[\"newValue\"] = newValue\n o[\"url\"] =
url\n o[\"storageArea\"] = storageArea\n o[\"bubbles\"] = bubbles\n o[\"cancelable\"] = cancelable\n
o[\"composed\"] = composed\n return o\n}\n\n\npublic external abstract class HTMLAppletElement :
HTMLElement {\n open var align: String\n open var alt: String\n open var archive: String\n open var code:
String\n open var codeBase: String\n open var height: String\n open var hspace: Int\n open var name:
String\n open var _object: String\n open var vspace: Int\n open var width: String\n\n companion object {\n
val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n\n/**\n * Exposes the JavaScript
[HTMLMarqueeElement](https://developer.mozilla.org/en/docs/Web/API/HTMLMarqueeElement) to Kotlin\n
*\n\npublic external abstract class HTMLMarqueeElement : HTMLElement {\n open var behavior: String\n open
var bgColor: String\n open var direction: String\n open var height: String\n open var hspace: Int\n open var
loop: Int\n open var scrollAmount: Int\n open var scrollDelay: Int\n open var trueSpeed: Boolean\n open var
vspace: Int\n open var width: String\n open var onbounce: ((Event) -> dynamic)?\n open var onfinish: ((Event)
-> dynamic)?\n open var onstart: ((Event) -> dynamic)?\n fun start()\n fun stop()\n\n companion object {\n
val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n\n\n/**\n * Exposes the JavaScript
[HTMLFrameSetElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFrameSetElement) to Kotlin\n
*\n\npublic external abstract class HTMLFrameSetElement : HTMLElement, WindowEventHandlers {\n open var
cols: String\n open var rows: String\n\n companion object {\n val ELEMENT_NODE: Short\n val
ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val

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ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external abstract class
HTMLFrameElement : HTMLElement {\n    open var name: String\n    open var scrolling: String\n    open var src:
String\n    open var frameBorder: String\n    open var longDesc: String\n    open var noResize: Boolean\n    open val
contentDocument: Document?\n    open val contentWindow: Window?\n    open var marginHeight: String\n    open
var marginWidth: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external abstract class
HTMLDirectoryElement : HTMLElement {\n    open var compact: Boolean\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[HTMLFontElement](https://developer.mozilla.org/en/docs/Web/API/HTMLFontElement) to Kotlin\n *\n\npublic
external abstract class HTMLFontElement : HTMLElement {\n    open var color: String\n    open var face: String\n
open var size: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface External
{\n    fun AddSearchProvider()\n    fun IsSearchProviderInstalled()\n}\n\npublic external interface EventInit {\n
var bubbles: Boolean? /* = false */\n    get() = definedExternally\n    set(value) = definedExternally\n
var cancelable: Boolean? /* = false */\n    get() = definedExternally\n    set(value) = definedExternally\n
var composed: Boolean? /* = false */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",

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external abstract class HTMLCollection : ItemArrayLike<Element>, UnionElementOrHTMLCollection {
    override fun item(index: Int): Element?
    fun namedItem(name: String): Element?
}
@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline operator fun HTMLCollection.get(index: Int): Element? = asDynamic()[index]
@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline operator fun HTMLCollection.get(name: String): Element? = asDynamic()[name]
/** Exposes the JavaScript [MutationObserver](https://developer.mozilla.org/en/docs/Web/API/MutationObserver) to Kotlin */
public external open class MutationObserver(callback: (Array<MutationRecord>, MutationObserver) -> Unit) {
    fun observe(target: Node, options: MutationObserverInit = definedExternally)
    fun disconnect()
    fun takeRecords(): Array<MutationRecord>
}
/** Exposes the JavaScript [MutationObserverInit](https://developer.mozilla.org/en/docs/Web/API/MutationObserverInit) to Kotlin */
public external interface MutationObserverInit {
    var childList: Boolean? /* = false */
    get() = definedExternally
    set(value) = definedExternally
    var attributes: Boolean?
    get() = definedExternally
    set(value) = definedExternally
    var characterData: Boolean?
    get() = definedExternally
    set(value) = definedExternally
    var subtree: Boolean? /* = false */
    get() = definedExternally
    set(value) = definedExternally
    var attributeOldValue: Boolean?
    get() = definedExternally
    set(value) = definedExternally
    var characterDataOldValue: Boolean?
    get() = definedExternally
    set(value) = definedExternally
    var attributeFilter: Array<String>?
    get() = definedExternally
    set(value) = definedExternally
}
@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun MutationObserverInit(childList: Boolean? = false, attributes: Boolean? = undefined, characterData: Boolean? = undefined, subtree: Boolean? = false, attributeOldValue: Boolean? = undefined, characterDataOldValue: Boolean? = undefined, attributeFilter: Array<String>? = undefined): MutationObserverInit {
    val o = js("{}")
    o["childList"] = childList
    o["attributes"] = attributes
    o["characterData"] = characterData
    o["subtree"] = subtree
    o["attributeOldValue"] = attributeOldValue
    o["characterDataOldValue"] = characterDataOldValue
    o["attributeFilter"] = attributeFilter
    return o
}
/** Exposes the JavaScript [MutationRecord](https://developer.mozilla.org/en/docs/Web/API/MutationRecord) to Kotlin */
public external abstract class MutationRecord {
    open val type: String
    open val target: Node
    open val addedNodes: NodeList
    open val removedNodes: NodeList
    open val previousSibling: Node?
    open val nextSibling: Node?
    open val attributeName: String?
    open val attributeNamespace: String?
    open val oldValue: String?
}
/** Exposes the JavaScript [Node](https://developer.mozilla.org/en/docs/Web/API/Node) to Kotlin */
public external abstract class Node : EventTarget {
    open val nodeName: String
    open val baseURI: String
    open val isConnected: Boolean
    open val ownerDocument: Document?
    open val parentNode: Node?
    open val parentElement: Element?
    open val childNodes: NodeList
    open val firstChild: Node?
    open val lastChild: Node?
    open val previousSibling: Node?
    open val nextSibling: Node?
    open var nodeValue: String?
    open var textContent: String?
    fun getRootNode(options: GetRootNodeOptions = definedExternally): Node
    fun hasChildNodes(): Boolean
    fun normalize()
    fun cloneNode(deep: Boolean = definedExternally): Node
    fun isEqualNode(otherNode: Node?): Boolean
    fun isSameNode(otherNode: Node?): Boolean
    fun compareDocumentPosition(other: Node): Short
    fun contains(other: Node?): Boolean
    fun lookupPrefix(namespace: String?): String?
    fun lookupNamespaceURI(prefix: String?): String?
    fun isDefaultNamespace(namespace: String?): Boolean
    fun insertBefore(node: Node, child: Node?): Node
    fun appendChild(node: Node): Node
    fun replaceChild(node: Node, child: Node): Node
    fun removeChild(child: Node): Node
}
companion object {
    val ELEMENT_NODE: Short
    val ATTRIBUTE_NODE: Short
    val TEXT_NODE: Short
    val CDATA_SECTION_NODE: Short
    val ENTITY_REFERENCE_NODE: Short
    val ENTITY_NODE: Short
    val PROCESSING_INSTRUCTION_NODE: Short
    val COMMENT_NODE: Short
    val DOCUMENT_NODE: Short
    val DOCUMENT_TYPE_NODE: Short
}

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DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\npublic external interface
GetRootNodeOptions {n    var composed: Boolean? /* = false */n    get() = definedExternallyn    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")n@kotlin.internal.InlineOnly\n\npublic inline fun GetRootNodeOptions(composed:
Boolean? = false): GetRootNodeOptions {n    val o = js(\"{\}\")n    o[\"composed\"] = composedn    return
o\n}\n\n/**n * Exposes the JavaScript [Document](https://developer.mozilla.org/en/docs/Web/API/Document) to
Kotlinn */n\npublic external open class Document : Node, GlobalEventHandlers,
DocumentAndElementEventHandlers, NonElementParentNode, DocumentOrShadowRoot, ParentNode,
GeometryUtils {n    open val implementation: DOMImplementationn    open val URL: Stringn    open val
documentURI: Stringn    open val origin: Stringn    open val compatMode: Stringn    open val characterSet:
Stringn    open val charset: Stringn    open val inputEncoding: Stringn    open val contentType: Stringn    open val
doctype: DocumentType?n    open val documentElement: Element?n    open val location: Location?n    var
domain: Stringn    open val referrer: Stringn    var cookie: Stringn    open val lastModified: Stringn    open val
readyState: DocumentReadyState\n    var title: Stringn    var dir: Stringn    var body: HTMLElement?n    open val
head: HTMLHeadElement?n    open val images: HTMLCollection\n    open val embeds: HTMLCollection\n    open
val plugins: HTMLCollection\n    open val links: HTMLCollection\n    open val forms: HTMLCollection\n    open
val scripts: HTMLCollection\n    open val currentScript: HTMLScriptElement?n    open val defaultView:
Window?n    open val activeElement: Element?n    var designMode: Stringn    var onreadystatechange: ((Event) ->
dynamic)?n    var fgColor: Stringn    var linkColor: Stringn    var vlinkColor: Stringn    var alinkColor: Stringn
var bgColor: Stringn    open val anchors: HTMLCollection\n    open val applets: HTMLCollection\n    open val all:
HTMLAllCollection\n    open val scrollingElement: Element?n    open val styleSheets: StyleSheetList\n    open val
rootElement: SVGSVGElement?n    open val fullscreenEnabled: Boolean\n    open val fullscreen: Boolean\n    var
onfullscreenchange: ((Event) -> dynamic)?n    var onfullscreenerror: ((Event) -> dynamic)?n    override var
onabort: ((Event) -> dynamic)?n    override var onblur: ((FocusEvent) -> dynamic)?n    override var oncancel:
((Event) -> dynamic)?n    override var oncanplay: ((Event) -> dynamic)?n    override var oncanplaythrough:
((Event) -> dynamic)?n    override var onchange: ((Event) -> dynamic)?n    override var onclick: ((MouseEvent) ->
dynamic)?n    override var onclose: ((Event) -> dynamic)?n    override var oncontextmenu: ((MouseEvent) ->
dynamic)?n    override var oncuechange: ((Event) -> dynamic)?n    override var ondblclick: ((MouseEvent) ->
dynamic)?n    override var ondrag: ((DragEvent) -> dynamic)?n    override var ondragend: ((DragEvent) ->
dynamic)?n    override var ondragenter: ((DragEvent) -> dynamic)?n    override var ondragexit: ((DragEvent) ->
dynamic)?n    override var ondragleave: ((DragEvent) -> dynamic)?n    override var ondragover: ((DragEvent) ->
dynamic)?n    override var ondragstart: ((DragEvent) -> dynamic)?n    override var ondrop: ((DragEvent) ->
dynamic)?n    override var ondurationchange: ((Event) -> dynamic)?n    override var onemptied: ((Event) ->
dynamic)?n    override var onended: ((Event) -> dynamic)?n    override var onerror: ((dynamic, String, Int, Int,
Any?) -> dynamic)?n    override var onfocus: ((FocusEvent) -> dynamic)?n    override var oninput: ((InputEvent) ->
dynamic)?n    override var oninvalid: ((Event) -> dynamic)?n    override var onkeydown: ((KeyboardEvent) ->
dynamic)?n    override var onkeypress: ((KeyboardEvent) -> dynamic)?n    override var onkeyup:
((KeyboardEvent) -> dynamic)?n    override var onload: ((Event) -> dynamic)?n    override var onloadeddata:
((Event) -> dynamic)?n    override var onloadedmetadata: ((Event) -> dynamic)?n    override var onloadend:
((Event) -> dynamic)?n    override var onloadstart: ((ProgressEvent) -> dynamic)?n    override var onmousedown:
((MouseEvent) -> dynamic)?n    override var onmouseenter: ((MouseEvent) -> dynamic)?n    override var
onmouseleave: ((MouseEvent) -> dynamic)?n    override var onmousemove: ((MouseEvent) -> dynamic)?n
override var onmouseout: ((MouseEvent) -> dynamic)?n    override var onmouseover: ((MouseEvent) ->
dynamic)?n    override var onmouseup: ((MouseEvent) -> dynamic)?n    override var onwheel: ((WheelEvent) ->

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dynamic)?\n  override var onPause: ((Event) -> dynamic)?\n  override var onPlay: ((Event) -> dynamic)?\n
override var onPlaying: ((Event) -> dynamic)?\n  override var onProgress: ((ProgressEvent) -> dynamic)?\n
override var onRateChange: ((Event) -> dynamic)?\n  override var onReset: ((Event) -> dynamic)?\n  override var
onResize: ((Event) -> dynamic)?\n  override var onScroll: ((Event) -> dynamic)?\n  override var onSeeked:
((Event) -> dynamic)?\n  override var onSeeking: ((Event) -> dynamic)?\n  override var onSelect: ((Event) ->
dynamic)?\n  override var onShow: ((Event) -> dynamic)?\n  override var onStalled: ((Event) -> dynamic)?\n
override var onSubmit: ((Event) -> dynamic)?\n  override var onSuspend: ((Event) -> dynamic)?\n  override var
onTimeUpdate: ((Event) -> dynamic)?\n  override var onToggle: ((Event) -> dynamic)?\n  override var
onVolumeChange: ((Event) -> dynamic)?\n  override var onWaiting: ((Event) -> dynamic)?\n  override var
onGotPointerCapture: ((PointerEvent) -> dynamic)?\n  override var onLostPointerCapture: ((PointerEvent) ->
dynamic)?\n  override var onPointerDown: ((PointerEvent) -> dynamic)?\n  override var onPointerMove:
((PointerEvent) -> dynamic)?\n  override var onPointerUp: ((PointerEvent) -> dynamic)?\n  override var
onPointerCancel: ((PointerEvent) -> dynamic)?\n  override var onPointerOver: ((PointerEvent) -> dynamic)?\n
override var onPointerOut: ((PointerEvent) -> dynamic)?\n  override var onPointerEnter: ((PointerEvent) ->
dynamic)?\n  override var onPointerLeave: ((PointerEvent) -> dynamic)?\n  override var onCopy:
((ClipboardEvent) -> dynamic)?\n  override var onCut: ((ClipboardEvent) -> dynamic)?\n  override var onPaste:
((ClipboardEvent) -> dynamic)?\n  override val fullscreenElement: Element?\n  override val children:
HTMLCollection\n  override val firstElementChild: Element?\n  override val lastElementChild: Element?\n
override val childElementCount: Int\n  fun getElementsByTagName(qualifiedName: String): HTMLCollection\n
fun getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection\n  fun
getElementsByTagName(classNames: String): HTMLCollection\n  fun createElement(localName: String,
options: ElementCreationOptions = definedExternally): Element\n  fun createElementNS(namespace: String?,
qualifiedName: String, options: ElementCreationOptions = definedExternally): Element\n  fun
createDocumentFragment(): DocumentFragment\n  fun createTextNode(data: String): Text\n  fun
createCDATASection(data: String): CDATASection\n  fun createComment(data: String): Comment\n  fun
createProcessingInstruction(target: String, data: String): ProcessingInstruction\n  fun importNode(node: Node,
deep: Boolean = definedExternally): Node\n  fun adoptNode(node: Node): Node\n  fun
createAttribute(localName: String): Attr\n  fun createAttributeNS(namespace: String?, qualifiedName: String):
Attr\n  fun createEvent(`interface`: String): Event\n  fun createRange(): Range\n  fun createNodeIterator(root:
Node, whatToShow: Int = definedExternally, filter: NodeFilter? = definedExternally): NodeIterator\n  fun
createNodeIterator(root: Node, whatToShow: Int = definedExternally, filter: ((Node) -> Short)? =
definedExternally): NodeIterator\n  fun createTreeWalker(root: Node, whatToShow: Int = definedExternally, filter:
NodeFilter? = definedExternally): TreeWalker\n  fun createTreeWalker(root: Node, whatToShow: Int =
definedExternally, filter: ((Node) -> Short)? = definedExternally): TreeWalker\n  fun
getElementsByTagName(elementName: String): NodeList\n  fun open(type: String = definedExternally, replace:
String = definedExternally): Document\n  fun open(url: String, name: String, features: String): Window\n  fun
close()\n  fun write(vararg text: String)\n  fun writeln(vararg text: String)\n  fun hasFocus(): Boolean\n  fun
execCommand(commandId: String, showUI: Boolean = definedExternally, value: String = definedExternally):
Boolean\n  fun queryCommandEnabled(commandId: String): Boolean\n  fun
queryCommandIndeterm(commandId: String): Boolean\n  fun queryCommandState(commandId: String):
Boolean\n  fun queryCommandSupported(commandId: String): Boolean\n  fun
queryCommandValue(commandId: String): String\n  fun clear()\n  fun captureEvents()\n  fun releaseEvents()\n
fun elementFromPoint(x: Double, y: Double): Element?\n  fun elementsFromPoint(x: Double, y: Double):
Array<Element>\n  fun caretPositionFromPoint(x: Double, y: Double): CaretPosition?\n  fun createTouch(view:
Window, target: EventTarget, identifier: Int, pageX: Int, pageY: Int, screenX: Int, screenY: Int): Touch\n  fun
createTouchList(vararg touches: Touch): TouchList\n  fun exitFullscreen(): Promise<Unit>\n  override fun
getElementById(elementId: String): Element?\n  override fun prepend(vararg nodes: dynamic)\n  override fun
append(vararg nodes: dynamic)\n  override fun querySelector(selectors: String): Element?\n  override fun

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querySelectorAll(selectors: String): NodeList\n  override fun getBoxQuads(options: BoxQuadOptions /* =
definedExternally */): Array<DOMQuad>\n  override fun convertQuadFromNode(quad: dynamic, from: dynamic,
options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n  override fun
convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad\n  override fun convertPointFromNode(point: DOMPointInit, from: dynamic,
options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint\n\n  companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n
  }\n\n  @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n  @kotlin.internal.InlineOnly\n  public inline operator fun Document.get(name: String):
dynamic = asDynamic()[name]\n\n  /**\n   * Exposes the JavaScript
[XMLDocument](https://developer.mozilla.org/en/docs/Web/API/XMLDocument) to Kotlin\n   *\n   public external
open class XMLDocument : Document {\n    companion object {\n      val ELEMENT_NODE: Short\n      val
ATTRIBUTE_NODE: Short\n      val TEXT_NODE: Short\n      val CDATA_SECTION_NODE: Short\n      val
ENTITY_REFERENCE_NODE: Short\n      val ENTITY_NODE: Short\n      val
PROCESSING_INSTRUCTION_NODE: Short\n      val COMMENT_NODE: Short\n      val
DOCUMENT_NODE: Short\n      val DOCUMENT_TYPE_NODE: Short\n      val
DOCUMENT_FRAGMENT_NODE: Short\n      val NOTATION_NODE: Short\n      val
DOCUMENT_POSITION_DISCONNECTED: Short\n      val DOCUMENT_POSITION_PRECEDING: Short\n
      val DOCUMENT_POSITION_FOLLOWING: Short\n      val DOCUMENT_POSITION_CONTAINS: Short\n
      val DOCUMENT_POSITION_CONTAINED_BY: Short\n      val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n\n    public external interface
ElementCreationOptions {\n      var `is`: String?\n      get() = definedExternally\n      set(value) =
definedExternally\n    }\n\n    @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n    @kotlin.internal.InlineOnly\n    public inline fun ElementCreationOptions(`is`: String?
= undefined): ElementCreationOptions {\n      val o = js(\"({})\")\n      o[\"is\"] = `is`\n      return o\n    }\n\n    /**\n     *
Exposes the JavaScript
[DOMImplementation](https://developer.mozilla.org/en/docs/Web/API/DOMImplementation) to Kotlin\n     *\n     public external
abstract class DOMImplementation {\n      fun createDocumentType(qualifiedName: String,
publicId: String, systemId: String): DocumentType\n      fun createDocument(namespace: String?, qualifiedName:
String, doctype: DocumentType? = definedExternally): XMLDocument\n      fun createHTMLDocument(title: String
= definedExternally): Document\n      fun hasFeature(): Boolean\n    }\n\n    /**\n     * Exposes the JavaScript
[DocumentType](https://developer.mozilla.org/en/docs/Web/API/DocumentType) to Kotlin\n     *\n     public external
abstract class DocumentType : Node, ChildNode {\n      open val name: String\n      open val publicId: String\n      open
val systemId: String\n\n      companion object {\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE:
Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n      }\n\n      public external interface
ElementCreationOptions {\n        var `is`: String?\n        get() = definedExternally\n        set(value) =
definedExternally\n      }\n\n      @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n      @kotlin.internal.InlineOnly\n      public inline fun ElementCreationOptions(`is`: String?
= undefined): ElementCreationOptions {\n        val o = js(\"({})\")\n        o[\"is\"] = `is`\n        return o\n      }\n\n      /**\n       *
Exposes the JavaScript

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    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[DocumentFragment](https://developer.mozilla.org/en/docs/Web/API/DocumentFragment) to Kotlin\n *\npublic
external open class DocumentFragment : Node, NonElementParentNode, ParentNode {\n    override val children:
HTMLCollection\n    override val firstElementChild: Element?\n    override val lastElementChild: Element?\n
override val childElementCount: Int\n    override fun getElementById(elementId: String): Element?\n    override fun
prepend(vararg nodes: dynamic)\n    override fun append(vararg nodes: dynamic)\n    override fun
querySelector(selectors: String): Element?\n    override fun querySelectorAll(selectors: String): NodeList\n\n
companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[ShadowRoot](https://developer.mozilla.org/en/docs/Web/API/ShadowRoot) to Kotlin\n *\npublic external open
class ShadowRoot : DocumentFragment, DocumentOrShadowRoot {\n    open val mode: ShadowRootMode\n
open val host: Element\n    override val fullscreenElement: Element?\n    companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[Element](https://developer.mozilla.org/en/docs/Web/API/Element) to Kotlin\n *\npublic external abstract class
Element : Node, ParentNode, NonDocumentTypeChildNode, ChildNode, Slotable, GeometryUtils,
UnionElementOrHTMLCollection, UnionElementOrRadioNodeList, UnionElementOrMouseEvent,
UnionElementOrProcessingInstruction {\n    open val namespaceURI: String?\n    open val prefix: String?\n    open
val localName: String\n    open val tagName: String\n    open var id: String\n    open var className: String\n    open
val classList: DOMTokenList\n    open var slot: String\n    open val attributes: NamedNodeMap\n    open val
shadowRoot: ShadowRoot?\n    open var scrollTop: Double\n    open var scrollLeft: Double\n    open val
scrollWidth: Int\n    open val scrollHeight: Int\n    open val clientTop: Int\n    open val clientLeft: Int\n    open val
clientWidth: Int\n    open val clientHeight: Int\n    open var innerHTML: String\n    open var outerHTML: String\n
fun hasAttributes(): Boolean\n    fun getAttributeNames(): Array<String>\n    fun getAttribute(qualifiedName:
String): String?\n    fun getAttributeNS(namespace: String?, localName: String): String?\n    fun
setAttribute(qualifiedName: String, value: String)\n    fun setAttributeNS(namespace: String?, qualifiedName:
String, value: String)\n    fun removeAttribute(qualifiedName: String)\n    fun removeAttributeNS(namespace:
String?, localName: String)\n    fun hasAttribute(qualifiedName: String): Boolean\n    fun
hasAttributeNS(namespace: String?, localName: String): Boolean\n    fun getAttributeNode(qualifiedName: String):
Attr?\n    fun getAttributeNodeNS(namespace: String?, localName: String): Attr?\n    fun setAttributeNode(attr:
Attr): Attr?\n    fun setAttributeNodeNS(attr: Attr): Attr?\n    fun removeAttributeNode(attr: Attr): Attr\n    fun
attachShadow(init: ShadowRootInit): ShadowRoot\n    fun closest(selectors: String): Element?\n    fun

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matches(selectors: String): Boolean\n fun webkitMatchesSelector(selectors: String): Boolean\n fun
getElementsByTagName(qualifiedName: String): HTMLCollection\n fun
getElementsByTagNameNS(namespace: String?, localName: String): HTMLCollection\n fun
getElementsByClassName(classNames: String): HTMLCollection\n fun insertAdjacentElement(where: String,
element: Element): Element?\n fun insertAdjacentText(where: String, data: String)\n fun getClientRects():
Array<DOMRect>\n fun getBoundingClientRect(): DOMRect\n fun scrollIntoView()\n fun
scrollIntoView(arg: dynamic)\n fun scroll(options: ScrollToOptions = definedExternally)\n fun scroll(x: Double,
y: Double)\n fun scrollTo(options: ScrollToOptions = definedExternally)\n fun scrollTo(x: Double, y: Double)\n
fun scrollBy(options: ScrollToOptions = definedExternally)\n fun scrollBy(x: Double, y: Double)\n fun
insertAdjacentHTML(position: String, text: String)\n fun setPointerCapture(pointerId: Int)\n fun
releasePointerCapture(pointerId: Int)\n fun hasPointerCapture(pointerId: Int): Boolean\n fun requestFullscreen():
Promise<Unit>\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE:
Short\n val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val
ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE: Short\n val
PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n\n\npublic external interface
ShadowRootInit {\n var mode: ShadowRootMode?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ShadowRootInit(mode:
ShadowRootMode?): ShadowRootInit {\n val o = js(\"({})\")\n o[\"mode\"] = mode\n return o\n}\n\n/**\n *
Exposes the JavaScript [NamedNodeMap](https://developer.mozilla.org/en/docs/Web/API/NamedNodeMap) to
Kotlin\n */\npublic external abstract class NamedNodeMap : ItemArrayLike<Attr> {\n fun
getNamedItemNS(namespace: String?, localName: String): Attr?\n fun setNamedItem(attr: Attr): Attr?\n fun
setNamedItemNS(attr: Attr): Attr?\n fun removeNamedItem(qualifiedName: String): Attr\n fun
removeNamedItemNS(namespace: String?, localName: String): Attr\n override fun item(index: Int): Attr?\n fun
getNamedItem(qualifiedName: String): Attr?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun NamedNodeMap.get(index:
Int): Attr? = asDynamic()[index]\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun
NamedNodeMap.get(qualifiedName: String): Attr? = asDynamic()[qualifiedName]\n\n/**\n * Exposes the
JavaScript [Attr](https://developer.mozilla.org/en/docs/Web/API/Attr) to Kotlin\n */\npublic external abstract class
Attr : Node {\n open val namespaceURI: String?\n open val prefix: String?\n open val localName: String\n
open val name: String\n open var value: String\n open val ownerElement: Element?\n open val specified:
Boolean\n\n companion object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n
val TEXT_NODE: Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE:
Short\n val ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val
COMMENT_NODE: Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n
val DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[CharacterData](https://developer.mozilla.org/en/docs/Web/API/CharacterData) to Kotlin\n */\npublic external
abstract class CharacterData : Node, NonDocumentTypeChildNode, ChildNode {\n open var data: String\n open

```

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val length: Int
fun substringData(offset: Int, count: Int): String
fun appendData(data: String)
fun insertData(offset: Int, data: String)
fun deleteData(offset: Int, count: Int)
fun replaceData(offset: Int, count: Int, data: String)

companion object {
    val ELEMENT_NODE: Short
    val ATTRIBUTE_NODE: Short
    val TEXT_NODE: Short
    val CDATA_SECTION_NODE: Short
    val ENTITY_REFERENCE_NODE: Short
    val ENTITY_NODE: Short
    val PROCESSING_INSTRUCTION_NODE: Short
    val COMMENT_NODE: Short
    val DOCUMENT_NODE: Short
    val DOCUMENT_TYPE_NODE: Short
    val DOCUMENT_FRAGMENT_NODE: Short
    val NOTATION_NODE: Short
    val DOCUMENT_POSITION_DISCONNECTED: Short
    val DOCUMENT_POSITION_PRECEDING: Short
    val DOCUMENT_POSITION_FOLLOWING: Short
    val DOCUMENT_POSITION_CONTAINS: Short
    val DOCUMENT_POSITION_CONTAINED_BY: Short
    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
}

/** Exposes the JavaScript [Text](https://developer.mozilla.org/en/docs/Web/API/Text) to Kotlin
 * public external open class Text(data: String = definedExternally) : CharacterData, Slotable, GeometryUtils {
    open val wholeText: String
    override val assignedSlot: HTMLSlotElement?
    override val previousElementSibling: Element?
    override val nextElementSibling: Element?
    fun splitText(offset: Int): Text
    override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>
    override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad
    override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad
    override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint
    override fun before(vararg nodes: dynamic)
    override fun after(vararg nodes: dynamic)
    override fun replaceWith(vararg nodes: dynamic)
    override fun remove()
}

companion object {
    val ELEMENT_NODE: Short
    val ATTRIBUTE_NODE: Short
    val TEXT_NODE: Short
    val CDATA_SECTION_NODE: Short
    val ENTITY_REFERENCE_NODE: Short
    val ENTITY_NODE: Short
    val PROCESSING_INSTRUCTION_NODE: Short
    val COMMENT_NODE: Short
    val DOCUMENT_NODE: Short
    val DOCUMENT_TYPE_NODE: Short
    val DOCUMENT_FRAGMENT_NODE: Short
    val NOTATION_NODE: Short
    val DOCUMENT_POSITION_DISCONNECTED: Short
    val DOCUMENT_POSITION_PRECEDING: Short
    val DOCUMENT_POSITION_FOLLOWING: Short
    val DOCUMENT_POSITION_CONTAINS: Short
    val DOCUMENT_POSITION_CONTAINED_BY: Short
    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
}

/** Exposes the JavaScript [CDATASection](https://developer.mozilla.org/en/docs/Web/API/CDATASection) to Kotlin
 * public external open class CDATASection : Text {
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}

/** Exposes the JavaScript [ProcessingInstruction](https://developer.mozilla.org/en/docs/Web/API/ProcessingInstruction) to Kotlin
 * public external abstract class ProcessingInstruction : CharacterData, LinkStyle, UnionElementOrProcessingInstruction {
    open val target: String
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
    }
}

```

```

Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[Comment](https://developer.mozilla.org/en/docs/Web/API/Comment) to Kotlin\n *\npublic external open class
Comment(data: String = definedExternally) : CharacterData {\n    override val previousElementSibling: Element?\n
    override val nextElementSibling: Element?\n    override fun before(vararg nodes: dynamic)\n    override fun
after(vararg nodes: dynamic)\n    override fun replaceWith(vararg nodes: dynamic)\n    override fun remove()\n\n
companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val
TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val
COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n
    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[Range](https://developer.mozilla.org/en/docs/Web/API/Range) to Kotlin\n *\npublic external open class Range {\n
    open val startContainer: Node\n    open val startOffset: Int\n    open val endContainer: Node\n    open val
endOffset: Int\n    open val collapsed: Boolean\n    open val commonAncestorContainer: Node\n    fun setStart(node:
Node, offset: Int)\n    fun setEnd(node: Node, offset: Int)\n    fun setStartBefore(node: Node)\n    fun
setStartAfter(node: Node)\n    fun setEndBefore(node: Node)\n    fun setEndAfter(node: Node)\n    fun
collapse(toStart: Boolean = definedExternally)\n    fun selectNode(node: Node)\n    fun selectNodeContents(node:
Node)\n    fun compareBoundaryPoints(how: Short, sourceRange: Range): Short\n    fun deleteContents()\n    fun
extractContents(): DocumentFragment\n    fun cloneContents(): DocumentFragment\n    fun insertNode(node:
Node)\n    fun surroundContents(newParent: Node)\n    fun cloneRange(): Range\n    fun detach()\n    fun
isPointInRange(node: Node, offset: Int): Boolean\n    fun comparePoint(node: Node, offset: Int): Short\n    fun
intersectsNode(node: Node): Boolean\n    fun getClientRects(): Array<DOMRect>\n    fun
getBoundingClientRect(): DOMRect\n    fun createContextualFragment(fragment: String): DocumentFragment\n\n
companion object {\n    val START_TO_START: Short\n    val START_TO_END: Short\n    val
END_TO_END: Short\n    val END_TO_START: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[NodeIterator](https://developer.mozilla.org/en/docs/Web/API/NodeIterator) to Kotlin\n *\npublic external abstract
class NodeIterator {\n    open val root: Node\n    open val referenceNode: Node\n    open val
pointerBeforeReferenceNode: Boolean\n    open val whatToShow: Int\n    open val filter: NodeFilter?\n    fun
nextNode(): Node?\n    fun previousNode(): Node?\n    fun detach()\n}\n\n/**\n * Exposes the JavaScript
[TreeWalker](https://developer.mozilla.org/en/docs/Web/API/TreeWalker) to Kotlin\n *\npublic external abstract
class TreeWalker {\n    open val root: Node\n    open val whatToShow: Int\n    open val filter: NodeFilter?\n    open
var currentNode: Node\n    fun parentNode(): Node?\n    fun firstChild(): Node?\n    fun lastChild(): Node?\n    fun
previousSibling(): Node?\n    fun nextSibling(): Node?\n    fun previousNode(): Node?\n    fun nextNode():
Node?\n}\n\n/**\n * Exposes the JavaScript
[NodeFilter](https://developer.mozilla.org/en/docs/Web/API/NodeFilter) to Kotlin\n
*\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic external interface NodeFilter {\n
    fun acceptNode(node: Node): Short\n\n    companion object {\n        val FILTER_ACCEPT: Short\n        val
FILTER_REJECT: Short\n        val FILTER_SKIP: Short\n        val SHOW_ALL: Int\n        val
SHOW_ELEMENT: Int\n        val SHOW_ATTRIBUTE: Int\n        val SHOW_TEXT: Int\n        val

```

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SHOW_CDATA_SECTION: Int\n    val SHOW_ENTITY_REFERENCE: Int\n    val SHOW_ENTITY: Int\n    val SHOW_PROCESSING_INSTRUCTION: Int\n    val SHOW_COMMENT: Int\n    val
SHOW_DOCUMENT: Int\n    val SHOW_DOCUMENT_TYPE: Int\n    val
SHOW_DOCUMENT_FRAGMENT: Int\n    val SHOW_NOTATION: Int\n } \n} \n \n /** \n * Exposes the
JavaScript [DOMTokenList](https://developer.mozilla.org/en/docs/Web/API/DOMTokenList) to Kotlin \n * \n public
external abstract class DOMTokenList : ItemArrayLike<String> { \n    open var value: String \n    fun contains(token:
String): Boolean \n    fun add(vararg tokens: String) \n    fun remove(vararg tokens: String) \n    fun toggle(token:
String, force: Boolean = definedExternally): Boolean \n    fun replace(token: String, newToken: String) \n    fun
supports(token: String): Boolean \n    override fun item(index: Int):
String? \n} \n} \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline operator fun DOMTokenList.get(index:
Int): String? = asDynamic()[index] \n \n /** \n * Exposes the JavaScript
[DOMPointReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMPointReadOnly) to Kotlin \n * \n public
external open class DOMPointReadOnly(x: Double, y: Double, z: Double, w: Double) { \n    open val x: Double \n
open val y: Double \n    open val z: Double \n    open val w: Double \n    fun matrixTransform(matrix:
DOMMatrixReadOnly): DOMPoint \n} \n \n /** \n * Exposes the JavaScript
[DOMPoint](https://developer.mozilla.org/en/docs/Web/API/DOMPoint) to Kotlin \n * \n public external open class
DOMPoint : DOMPointReadOnly { \n    constructor(point: DOMPointInit) \n    constructor(x: Double =
definedExternally, y: Double = definedExternally, z: Double = definedExternally, w: Double = definedExternally) \n
    override var x: Double \n    override var y: Double \n    override var z: Double \n    override var w:
Double \n} \n \n /** \n * Exposes the JavaScript
[DOMPointInit](https://developer.mozilla.org/en/docs/Web/API/DOMPointInit) to Kotlin \n * \n public external
interface DOMPointInit { \n    var x: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var y: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var z: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var w: Double? /* = 1.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n} \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun DOMPointInit(x: Double? = 0.0, y:
Double? = 0.0, z: Double? = 0.0, w: Double? = 1.0): DOMPointInit { \n    val o = js("{}") \n    o["x"] = x \n
o["y"] = y \n    o["z"] = z \n    o["w"] = w \n    return o \n} \n \n /** \n * Exposes the JavaScript
[DOMRect](https://developer.mozilla.org/en/docs/Web/API/DOMRect) to Kotlin \n * \n public external open class
DOMRect(x: Double = definedExternally, y: Double = definedExternally, width: Double = definedExternally,
height: Double = definedExternally) : DOMRectReadOnly { \n    override var x: Double \n    override var y: Double \n
    override var width: Double \n    override var height: Double \n} \n \n /** \n * Exposes the JavaScript
[DOMRectReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMRectReadOnly) to Kotlin \n * \n public
external open class DOMRectReadOnly(x: Double, y: Double, width: Double, height: Double) { \n    open val x:
Double \n    open val y: Double \n    open val width: Double \n    open val height: Double \n    open val top: Double \n
open val right: Double \n    open val bottom: Double \n    open val left: Double \n} \n \n public external interface
DOMRectInit { \n    var x: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var y: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var width: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n    var height: Double? /* = 0.0 */ \n    get() = definedExternally \n    set(value) =
definedExternally \n} \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun DOMRectInit(x: Double? = 0.0, y:
Double? = 0.0, width: Double? = 0.0, height: Double? = 0.0): DOMRectInit { \n    val o = js("{}") \n    o["x"] =
x \n    o["y"] = y \n    o["width"] = width \n    o["height"] = height \n    return o \n} \n \n public external interface
DOMRectList : ItemArrayLike<DOMRect> { \n    override fun item(index: Int):
DOMRect? \n} \n} \n @Suppress("INVISIBLE_REFERENCE",

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\ "INVISIBLE_MEMBER"\n@kotlin.internal.InlineOnly\npublic inline operator fun DOMRectList.get(index: Int):
DOMRect? = asDynamic()[index]\n\n/**\n * Exposes the JavaScript
[DOMQuad](https://developer.mozilla.org/en/docs/Web/API/DOMQuad) to Kotlin\n *\n\npublic external open class
DOMQuad {\n    constructor(p1: DOMPointInit = definedExternally, p2: DOMPointInit = definedExternally, p3:
DOMPointInit = definedExternally, p4: DOMPointInit = definedExternally)\n    constructor(rect: DOMRectInit)\n
open val p1: DOMPoint\n    open val p2: DOMPoint\n    open val p3: DOMPoint\n    open val p4: DOMPoint\n
open val bounds: DOMRectReadOnly\n}\n\n/**\n * Exposes the JavaScript
[DOMMatrixReadOnly](https://developer.mozilla.org/en/docs/Web/API/DOMMatrixReadOnly) to Kotlin\n
*\n\npublic external open class DOMMatrixReadOnly(numberSequence: Array<Double>) {\n    open val a: Double\n
open val b: Double\n    open val c: Double\n    open val d: Double\n    open val e: Double\n    open val f: Double\n
open val m11: Double\n    open val m12: Double\n    open val m13: Double\n    open val m14: Double\n    open val
m21: Double\n    open val m22: Double\n    open val m23: Double\n    open val m24: Double\n    open val m31:
Double\n    open val m32: Double\n    open val m33: Double\n    open val m34: Double\n    open val m41: Double\n
open val m42: Double\n    open val m43: Double\n    open val m44: Double\n    open val is2D: Boolean\n    open
val isIdentity: Boolean\n    fun translate(tx: Double, ty: Double, tz: Double = definedExternally): DOMMatrix\n
fun scale(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n
fun scale3d(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally, originZ:
Double = definedExternally): DOMMatrix\n    fun scaleNonUniform(scaleX: Double, scaleY: Double =
definedExternally, scaleZ: Double = definedExternally, originX: Double = definedExternally, originY: Double =
definedExternally, originZ: Double = definedExternally): DOMMatrix\n    fun rotate(angle: Double, originX:
Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n    fun rotateFromVector(x:
Double, y: Double): DOMMatrix\n    fun rotateAxisAngle(x: Double, y: Double, z: Double, angle: Double):
DOMMatrix\n    fun skewX(sx: Double): DOMMatrix\n    fun skewY(sy: Double): DOMMatrix\n    fun
multiply(other: DOMMatrix): DOMMatrix\n    fun flipX(): DOMMatrix\n    fun flipY(): DOMMatrix\n    fun
inverse(): DOMMatrix\n    fun transformPoint(point: DOMPointInit = definedExternally): DOMPoint\n    fun
toFloat32Array(): Float32Array\n    fun toFloat64Array(): Float64Array\n}\n\n/**\n * Exposes the JavaScript
[DOMMatrix](https://developer.mozilla.org/en/docs/Web/API/DOMMatrix) to Kotlin\n *\n\npublic external open
class DOMMatrix() : DOMMatrixReadOnly {\n    constructor(transformList: String)\n    constructor(other:
DOMMatrixReadOnly)\n    constructor(array32: Float32Array)\n    constructor(array64: Float64Array)\n
constructor(numberSequence: Array<Double>)\n    override var a: Double\n    override var b: Double\n    override
var c: Double\n    override var d: Double\n    override var e: Double\n    override var f: Double\n    override var m11:
Double\n    override var m12: Double\n    override var m13: Double\n    override var m14: Double\n    override var
m21: Double\n    override var m22: Double\n    override var m23: Double\n    override var m24: Double\n    override
var m31: Double\n    override var m32: Double\n    override var m33: Double\n    override var m34: Double\n
override var m41: Double\n    override var m42: Double\n    override var m43: Double\n    override var m44:
Double\n    fun multiplySelf(other: DOMMatrix): DOMMatrix\n    fun preMultiplySelf(other: DOMMatrix):
DOMMatrix\n    fun translateSelf(tx: Double, ty: Double, tz: Double = definedExternally): DOMMatrix\n    fun
scaleSelf(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n
fun scale3dSelf(scale: Double, originX: Double = definedExternally, originY: Double = definedExternally,
originZ: Double = definedExternally): DOMMatrix\n    fun scaleNonUniformSelf(scaleX: Double, scaleY: Double =
definedExternally, scaleZ: Double = definedExternally, originX: Double = definedExternally, originY: Double =
definedExternally, originZ: Double = definedExternally): DOMMatrix\n    fun rotateSelf(angle: Double, originX:
Double = definedExternally, originY: Double = definedExternally): DOMMatrix\n    fun rotateFromVectorSelf(x:
Double, y: Double): DOMMatrix\n    fun rotateAxisAngleSelf(x: Double, y: Double, z: Double, angle: Double):
DOMMatrix\n    fun skewXSelf(sx: Double): DOMMatrix\n    fun skewYSelf(sy: Double): DOMMatrix\n    fun
invertSelf(): DOMMatrix\n    fun setMatrixValue(transformList: String): DOMMatrix\n}\n\n\npublic external
interface ScrollOptions {\n    var behavior: ScrollBehavior? /* = ScrollBehavior.AUTO */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\ "INVISIBLE_REFERENCE\ " ,

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\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun ScrollOptions(behavior:
ScrollBehavior? = ScrollBehavior.AUTO): ScrollOptions {\n  val o = js(\`(\{\})\`) \n  o[\`behavior\`] = behavior\n
return o\n}\n\n\`*\n * Exposes the JavaScript
[ScrollToOptions](https://developer.mozilla.org/en/docs/Web/API/ScrollToOptions) to Kotlin\n *\n\npublic external
interface ScrollToOptions : ScrollOptions {\n  var left: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n  var top: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\`INVISIBLE_REFERENCE\`),
\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun ScrollToOptions(left: Double? =
undefined, top: Double? = undefined, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollToOptions {\n
val o = js(\`(\{\})\`) \n  o[\`left\`] = left\n  o[\`top\`] = top\n  o[\`behavior\`] = behavior\n  return o\n}\n\n\`*\n
 * Exposes the JavaScript [MediaQueryList](https://developer.mozilla.org/en/docs/Web/API/MediaQueryList) to
Kotlin\n *\n\npublic external abstract class MediaQueryList : EventTarget {\n  open val media: String\n  open val
matches: Boolean\n  open var onchange: ((Event) -> dynamic)?\n  fun addListener(listener: EventListener?)\n
fun addListener(listener: ((Event) -> Unit)?)\n  fun removeListener(listener: EventListener?)\n  fun
removeListener(listener: ((Event) -> Unit)?)\n}\n\n\`*\n * Exposes the JavaScript
[MediaQueryListEvent](https://developer.mozilla.org/en/docs/Web/API/MediaQueryListEvent) to Kotlin\n
*\n\npublic external open class MediaQueryListEvent(type: String, eventInitDict: MediaQueryListEventInit =
definedExternally) : Event {\n  open val media: String\n  open val matches: Boolean\n\n  companion object {\n
    val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val
BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface MediaQueryListEventInit : EventInit {\n  var
media: String? /* = \"\" */\n    get() = definedExternally\n    set(value) = definedExternally\n  var matches:
Boolean? /* = false */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\`INVISIBLE_REFERENCE\`),
\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun MediaQueryListEventInit(media:
String? = \"\", matches: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false, composed:
Boolean? = false): MediaQueryListEventInit {\n  val o = js(\`(\{\})\`) \n  o[\`media\`] = media\n  o[\`matches\`] =
matches\n  o[\`bubbles\`] = bubbles\n  o[\`cancelable\`] = cancelable\n  o[\`composed\`] = composed\n  return
o\n}\n\n\`*\n * Exposes the JavaScript [Screen](https://developer.mozilla.org/en/docs/Web/API/Screen) to Kotlin\n
*\n\npublic external abstract class Screen {\n  open val availWidth: Int\n  open val availHeight: Int\n  open val
width: Int\n  open val height: Int\n  open val colorDepth: Int\n  open val pixelDepth: Int\n}\n\n\`*\n * Exposes
the JavaScript [CaretPosition](https://developer.mozilla.org/en/docs/Web/API/CaretPosition) to Kotlin\n *\n\npublic
external abstract class CaretPosition {\n  open val offsetNode: Node\n  open val offset: Int\n  fun
getClientRect(): DOMRect?\n}\n\npublic external interface ScrollIntoViewOptions : ScrollOptions {\n  var block:
ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n    get() = definedExternally\n    set(value) =
definedExternally\n  var inline: ScrollLogicalPosition? /* = ScrollLogicalPosition.CENTER */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\`INVISIBLE_REFERENCE\`),
\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun ScrollIntoViewOptions(block:
ScrollLogicalPosition? = ScrollLogicalPosition.CENTER, inline: ScrollLogicalPosition? =
ScrollLogicalPosition.CENTER, behavior: ScrollBehavior? = ScrollBehavior.AUTO): ScrollIntoViewOptions {\n
val o = js(\`(\{\})\`) \n  o[\`block\`] = block\n  o[\`inline\`] = inline\n  o[\`behavior\`] = behavior\n  return
o\n}\n\npublic external interface BoxQuadOptions {\n  var box: CSSBoxType? /* = CSSBoxType.BORDER */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var relativeTo: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\`INVISIBLE_REFERENCE\`),
\`INVISIBLE_MEMBER\`)@kotlin.internal.InlineOnly\npublic inline fun BoxQuadOptions(box: CSSBoxType?
= CSSBoxType.BORDER, relativeTo: dynamic = undefined): BoxQuadOptions {\n  val o = js(\`(\{\})\`) \n
o[\`box\`] = box\n  o[\`relativeTo\`] = relativeTo\n  return o\n}\n\npublic external interface
ConvertCoordinateOptions {\n  var fromBox: CSSBoxType? /* = CSSBoxType.BORDER */\n    get() =
definedExternally\n    set(value) = definedExternally\n  var toBox: CSSBoxType? /* = CSSBoxType.BORDER

```

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*/\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ConvertCoordinateOptions(fromBox:
CSSBoxType? = CSSBoxType.BORDER, toBox: CSSBoxType? = CSSBoxType.BORDER):
ConvertCoordinateOptions {\n    val o = js(\"({})\")\n    o[\"fromBox\"] = fromBox\n    o[\"toBox\"] = toBox\n    return o\n}\n\n/**\n * Exposes the JavaScript
[GeometryUtils](https://developer.mozilla.org/en/docs/Web/API/GeometryUtils) to Kotlin\n */\npublic external
interface GeometryUtils {\n    fun getBoxQuads(options: BoxQuadOptions = definedExternally):
Array<DOMQuad>\n    fun convertQuadFromNode(quad: dynamic, from: dynamic, options:
ConvertCoordinateOptions = definedExternally): DOMQuad\n    fun convertRectFromNode(rect:
DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions = definedExternally): DOMQuad\n    fun
convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions =
definedExternally): DOMPoint\n}\n\n/**\n * Exposes the JavaScript
[Touch](https://developer.mozilla.org/en/docs/Web/API/Touch) to Kotlin\n */\npublic external abstract class Touch
{\n    open val identifier: Int\n    open val target: EventTarget\n    open val screenX: Int\n    open val screenY: Int\n
open val clientX: Int\n    open val clientY: Int\n    open val pageX: Int\n    open val pageY: Int\n    open val region:
String?\n}\n\npublic external abstract class TouchList : ItemArrayLike<Touch> {\n    override fun item(index: Int):
Touch?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun TouchList.get(index: Int):
Touch? = asDynamic()[index]\n\npublic external open class TouchEvent : UIEvent {\n    open val touches:
TouchList\n    open val targetTouches: TouchList\n    open val changedTouches: TouchList\n    open val altKey:
Boolean\n    open val metaKey: Boolean\n    open val ctrlKey: Boolean\n    open val shiftKey: Boolean\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET:
Short\n        val BUBBLING_PHASE: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[Image](https://developer.mozilla.org/en/docs/Web/API/Image) to Kotlin\n */\npublic external open class
Image(width: Int = definedExternally, height: Int = definedExternally) : HTMLImageElement {\n    override var
onabort: ((Event) -> dynamic)?\n    override var onblur: ((FocusEvent) -> dynamic)?\n    override var oncancel:
((Event) -> dynamic)?\n    override var oncanplay: ((Event) -> dynamic)?\n    override var oncanplaythrough:
((Event) -> dynamic)?\n    override var onchange: ((Event) -> dynamic)?\n    override var onclick: ((MouseEvent) ->
dynamic)?\n    override var onclose: ((Event) -> dynamic)?\n    override var oncontextmenu: ((MouseEvent) ->
dynamic)?\n    override var oncuechange: ((Event) -> dynamic)?\n    override var ondblclick: ((MouseEvent) ->
dynamic)?\n    override var ondrag: ((DragEvent) -> dynamic)?\n    override var ondragend: ((DragEvent) ->
dynamic)?\n    override var ondragenter: ((DragEvent) -> dynamic)?\n    override var ondragexit: ((DragEvent) ->
dynamic)?\n    override var ondragleave: ((DragEvent) -> dynamic)?\n    override var ondragover: ((DragEvent) ->
dynamic)?\n    override var ondragstart: ((DragEvent) -> dynamic)?\n    override var ondrop: ((DragEvent) ->
dynamic)?\n    override var ondurationchange: ((Event) -> dynamic)?\n    override var onemptied: ((Event) ->
dynamic)?\n    override var onended: ((Event) -> dynamic)?\n    override var onerror: ((dynamic, String, Int, Int,
Any?) -> dynamic)?\n    override var onfocus: ((FocusEvent) -> dynamic)?\n    override var oninput: ((InputEvent) ->
dynamic)?\n    override var oninvalid: ((Event) -> dynamic)?\n    override var onkeydown: ((KeyboardEvent) ->
dynamic)?\n    override var onkeypress: ((KeyboardEvent) -> dynamic)?\n    override var onkeyup:
((KeyboardEvent) -> dynamic)?\n    override var onload: ((Event) -> dynamic)?\n    override var onloadeddata:
((Event) -> dynamic)?\n    override var onloadedmetadata: ((Event) -> dynamic)?\n    override var onloadend:
((Event) -> dynamic)?\n    override var onloadstart: ((ProgressEvent) -> dynamic)?\n    override var onmousedown:
((MouseEvent) -> dynamic)?\n    override var onmouseenter: ((MouseEvent) -> dynamic)?\n    override var
onmouseleave: ((MouseEvent) -> dynamic)?\n    override var onmousemove: ((MouseEvent) -> dynamic)?\n    override
var onmouseout: ((MouseEvent) -> dynamic)?\n    override var onmouseover: ((MouseEvent) ->
dynamic)?\n    override var onmouseup: ((MouseEvent) -> dynamic)?\n    override var onwheel: ((WheelEvent) ->
dynamic)?\n    override var onpause: ((Event) -> dynamic)?\n    override var onplay: ((Event) -> dynamic)?\n

```

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override var onplaying: ((Event) -> dynamic)?\n  override var onprogress: ((ProgressEvent) -> dynamic)?\n
override var onratechange: ((Event) -> dynamic)?\n  override var onreset: ((Event) -> dynamic)?\n  override var
onresize: ((Event) -> dynamic)?\n  override var onscroll: ((Event) -> dynamic)?\n  override var onseeked:
((Event) -> dynamic)?\n  override var onseeking: ((Event) -> dynamic)?\n  override var onselect: ((Event) ->
dynamic)?\n  override var onshow: ((Event) -> dynamic)?\n  override var onstalled: ((Event) -> dynamic)?\n
override var onsubmit: ((Event) -> dynamic)?\n  override var onsuspend: ((Event) -> dynamic)?\n  override var
ontimeupdate: ((Event) -> dynamic)?\n  override var ontoggle: ((Event) -> dynamic)?\n  override var
onvolumechange: ((Event) -> dynamic)?\n  override var onwaiting: ((Event) -> dynamic)?\n  override var
ongotpointercapture: ((PointerEvent) -> dynamic)?\n  override var onlostpointercapture: ((PointerEvent) ->
dynamic)?\n  override var onpointerdown: ((PointerEvent) -> dynamic)?\n  override var onpointermove:
((PointerEvent) -> dynamic)?\n  override var onpointerup: ((PointerEvent) -> dynamic)?\n  override var
onpointercancel: ((PointerEvent) -> dynamic)?\n  override var onpointerover: ((PointerEvent) -> dynamic)?\n
override var onpointerout: ((PointerEvent) -> dynamic)?\n  override var onpointerenter: ((PointerEvent) ->
dynamic)?\n  override var onpointerleave: ((PointerEvent) -> dynamic)?\n  override var oncopy:
((ClipboardEvent) -> dynamic)?\n  override var oncut: ((ClipboardEvent) -> dynamic)?\n  override var onpaste:
((ClipboardEvent) -> dynamic)?\n  override var contentEditable: String\n  override val isContentEditable:
Boolean\n  override val style: CSSStyleDeclaration\n  override val children: HTMLCollection\n  override val
firstElementChild: Element?\n  override val lastElementChild: Element?\n  override val childElementCount: Int\n
  override val previousElementSibling: Element?\n  override val nextElementSibling: Element?\n  override val
assignedSlot: HTMLSlotElement?\n  override fun prepend(vararg nodes: dynamic)\n  override fun append(vararg
nodes: dynamic)\n  override fun querySelector(selectors: String): Element?\n  override fun
querySelectorAll(selectors: String): NodeList\n  override fun before(vararg nodes: dynamic)\n  override fun
after(vararg nodes: dynamic)\n  override fun replaceWith(vararg nodes: dynamic)\n  override fun remove()\n
override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>\n  override
fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMQuad\n  override fun convertRectFromNode(rect: DOMRectReadOnly, from:
dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n  override fun
convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMPoint\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val
ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n\n  public external open class
Audio(src: String = definedExternally) : HTMLAudioElement {\n  override var onabort: ((Event) -> dynamic)?\n
override var onblur: ((FocusEvent) -> dynamic)?\n  override var oncancel: ((Event) -> dynamic)?\n  override var
oncanplay: ((Event) -> dynamic)?\n  override var oncanplaythrough: ((Event) -> dynamic)?\n  override var
onchange: ((Event) -> dynamic)?\n  override var onclick: ((MouseEvent) -> dynamic)?\n  override var onclose:
((Event) -> dynamic)?\n  override var oncontextmenu: ((MouseEvent) -> dynamic)?\n  override var oncuechange:
((Event) -> dynamic)?\n  override var ondblclick: ((MouseEvent) -> dynamic)?\n  override var ondrag:
((DragEvent) -> dynamic)?\n  override var ondragend: ((DragEvent) -> dynamic)?\n  override var ondragenter:
((DragEvent) -> dynamic)?\n  override var ondragexit: ((DragEvent) -> dynamic)?\n  override var ondragleave:
((DragEvent) -> dynamic)?\n  override var ondragover: ((DragEvent) -> dynamic)?\n  override var ondragstart:
((DragEvent) -> dynamic)?\n  override var ondrop: ((DragEvent) -> dynamic)?\n  override var ondurationchange:

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((Event) -> dynamic)?\n  override var onemptied: ((Event) -> dynamic)?\n  override var onended: ((Event) ->
dynamic)?\n  override var onerror: ((dynamic, String, Int, Int, Any?) -> dynamic)?\n  override var onfocus:
((FocusEvent) -> dynamic)?\n  override var oninput: ((InputEvent) -> dynamic)?\n  override var oninvalid:
((Event) -> dynamic)?\n  override var onkeydown: ((KeyboardEvent) -> dynamic)?\n  override var onkeypress:
((KeyboardEvent) -> dynamic)?\n  override var onkeyup: ((KeyboardEvent) -> dynamic)?\n  override var onload:
((Event) -> dynamic)?\n  override var onloadeddata: ((Event) -> dynamic)?\n  override var onloadedmetadata:
((Event) -> dynamic)?\n  override var onloadend: ((Event) -> dynamic)?\n  override var onloadstart:
((ProgressEvent) -> dynamic)?\n  override var onmousedown: ((MouseEvent) -> dynamic)?\n  override var
onmouseenter: ((MouseEvent) -> dynamic)?\n  override var onmouseleave: ((MouseEvent) -> dynamic)?\n
override var onmousemove: ((MouseEvent) -> dynamic)?\n  override var onmouseout: ((MouseEvent) ->
dynamic)?\n  override var onmouseover: ((MouseEvent) -> dynamic)?\n  override var onmouseup: ((MouseEvent)
-> dynamic)?\n  override var onwheel: ((WheelEvent) -> dynamic)?\n  override var onpause: ((Event) ->
dynamic)?\n  override var onplay: ((Event) -> dynamic)?\n  override var onplaying: ((Event) -> dynamic)?\n
override var onprogress: ((ProgressEvent) -> dynamic)?\n  override var onratechange: ((Event) -> dynamic)?\n
override var onreset: ((Event) -> dynamic)?\n  override var onresize: ((Event) -> dynamic)?\n  override var
onscroll: ((Event) -> dynamic)?\n  override var onseeked: ((Event) -> dynamic)?\n  override var onseeking:
((Event) -> dynamic)?\n  override var onselect: ((Event) -> dynamic)?\n  override var onshow: ((Event) ->
dynamic)?\n  override var onstalled: ((Event) -> dynamic)?\n  override var onsubmit: ((Event) -> dynamic)?\n
override var onsuspend: ((Event) -> dynamic)?\n  override var ontimeupdate: ((Event) -> dynamic)?\n  override
var ontoggle: ((Event) -> dynamic)?\n  override var onvolumechange: ((Event) -> dynamic)?\n  override var
onwaiting: ((Event) -> dynamic)?\n  override var ongotpointercapture: ((PointerEvent) -> dynamic)?\n  override
var onlostpointercapture: ((PointerEvent) -> dynamic)?\n  override var onpointerdown: ((PointerEvent) ->
dynamic)?\n  override var onpointermove: ((PointerEvent) -> dynamic)?\n  override var onpointerup:
((PointerEvent) -> dynamic)?\n  override var onpointercancel: ((PointerEvent) -> dynamic)?\n  override var
onpointerover: ((PointerEvent) -> dynamic)?\n  override var onpointerout: ((PointerEvent) -> dynamic)?\n
override var onpointerenter: ((PointerEvent) -> dynamic)?\n  override var onpointerleave: ((PointerEvent) ->
dynamic)?\n  override var oncopy: ((ClipboardEvent) -> dynamic)?\n  override var oncut: ((ClipboardEvent) ->
dynamic)?\n  override var onpaste: ((ClipboardEvent) -> dynamic)?\n  override var contentEditable: String\n
override val isContentEditable: Boolean\n  override val style: CSSStyleDeclaration\n  override val children:
HTMLCollection\n  override val firstElementChild: Element?\n  override val lastElementChild: Element?\n
override val childElementCount: Int\n  override val previousElementSibling: Element?\n  override val
nextElementSibling: Element?\n  override val assignedSlot: HTMLSlotElement?\n  override fun prepend(vararg
nodes: dynamic)\n  override fun append(vararg nodes: dynamic)\n  override fun querySelector(selectors: String):
Element?\n  override fun querySelectorAll(selectors: String): NodeList\n  override fun before(vararg nodes:
dynamic)\n  override fun after(vararg nodes: dynamic)\n  override fun replaceWith(vararg nodes: dynamic)\n
override fun remove()\n  override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */):
Array<DOMQuad>\n  override fun convertQuadFromNode(quad: dynamic, from: dynamic, options:
ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n  override fun convertRectFromNode(rect:
DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad\n
override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* =
definedExternally */): DOMPoint\n\n  companion object {\n    val NETWORK_EMPTY: Short\n    val
NETWORK_IDLE: Short\n    val NETWORK_LOADING: Short\n    val NETWORK_NO_SOURCE: Short\n
    val HAVE_NOTHING: Short\n    val HAVE_METADATA: Short\n    val HAVE_CURRENT_DATA:
Short\n    val HAVE_FUTURE_DATA: Short\n    val HAVE_ENOUGH_DATA: Short\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val

```

DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val  
DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n  
val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n  
val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val  
DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }n}\n\n/\*\*\n \* Exposes the JavaScript  
[Option](https://developer.mozilla.org/en/docs/Web/API/Option) to Kotlin\n \*\npublic external open class  
Option(text: String = definedExternally, value: String = definedExternally, defaultSelected: Boolean =  
definedExternally, selected: Boolean = definedExternally) : HTMLElement {\n override var onabort:  
((Event) -> dynamic)?\n override var onblur: ((FocusEvent) -> dynamic)?\n override var oncancel: ((Event) ->  
dynamic)?\n override var oncanplay: ((Event) -> dynamic)?\n override var oncanplaythrough: ((Event) ->  
dynamic)?\n override var onchange: ((Event) -> dynamic)?\n override var onclick: ((MouseEvent) ->  
dynamic)?\n override var onclose: ((Event) -> dynamic)?\n override var oncontextmenu: ((MouseEvent) ->  
dynamic)?\n override var oncuechange: ((Event) -> dynamic)?\n override var ondblclick: ((MouseEvent) ->  
dynamic)?\n override var ondrag: ((DragEvent) -> dynamic)?\n override var ondragend: ((DragEvent) ->  
dynamic)?\n override var ondragenter: ((DragEvent) -> dynamic)?\n override var ondragexit: ((DragEvent) ->  
dynamic)?\n override var ondragleave: ((DragEvent) -> dynamic)?\n override var ondragover: ((DragEvent) ->  
dynamic)?\n override var ondragstart: ((DragEvent) -> dynamic)?\n override var ondrop: ((DragEvent) ->  
dynamic)?\n override var ondurationchange: ((Event) -> dynamic)?\n override var onemptied: ((Event) ->  
dynamic)?\n override var onended: ((Event) -> dynamic)?\n override var onerror: ((dynamic, String, Int, Int,  
Any?) -> dynamic)?\n override var onfocus: ((FocusEvent) -> dynamic)?\n override var oninput: ((InputEvent) -  
> dynamic)?\n override var oninvalid: ((Event) -> dynamic)?\n override var onkeydown: ((KeyboardEvent) ->  
dynamic)?\n override var onkeypress: ((KeyboardEvent) -> dynamic)?\n override var onkeyup:  
((KeyboardEvent) -> dynamic)?\n override var onload: ((Event) -> dynamic)?\n override var onloadeddata:  
((Event) -> dynamic)?\n override var onloadedmetadata: ((Event) -> dynamic)?\n override var onloadend:  
((Event) -> dynamic)?\n override var onloadstart: ((ProgressEvent) -> dynamic)?\n override var onmousedown:  
((MouseEvent) -> dynamic)?\n override var onmouseenter: ((MouseEvent) -> dynamic)?\n override var  
onmouseleave: ((MouseEvent) -> dynamic)?\n override var onmousemove: ((MouseEvent) -> dynamic)?\n  
override var onmouseout: ((MouseEvent) -> dynamic)?\n override var onmouseover: ((MouseEvent) ->  
dynamic)?\n override var onmouseup: ((MouseEvent) -> dynamic)?\n override var onwheel: ((WheelEvent) ->  
dynamic)?\n override var onpause: ((Event) -> dynamic)?\n override var onplay: ((Event) -> dynamic)?\n  
override var onplaying: ((Event) -> dynamic)?\n override var onprogress: ((ProgressEvent) -> dynamic)?\n  
override var onratechange: ((Event) -> dynamic)?\n override var onreset: ((Event) -> dynamic)?\n override var  
onresize: ((Event) -> dynamic)?\n override var onscroll: ((Event) -> dynamic)?\n override var onseeked:  
((Event) -> dynamic)?\n override var onseeking: ((Event) -> dynamic)?\n override var onselect: ((Event) ->  
dynamic)?\n override var onshow: ((Event) -> dynamic)?\n override var onstalled: ((Event) -> dynamic)?\n  
override var onsubmit: ((Event) -> dynamic)?\n override var onsuspend: ((Event) -> dynamic)?\n override var  
ontimeupdate: ((Event) -> dynamic)?\n override var ontoggle: ((Event) -> dynamic)?\n override var  
onvolumechange: ((Event) -> dynamic)?\n override var onwaiting: ((Event) -> dynamic)?\n override var  
ongotpointercapture: ((PointerEvent) -> dynamic)?\n override var onlostpointercapture: ((PointerEvent) ->  
dynamic)?\n override var onpointerdown: ((PointerEvent) -> dynamic)?\n override var onpointermove:  
((PointerEvent) -> dynamic)?\n override var onpointerup: ((PointerEvent) -> dynamic)?\n override var  
onpointercancel: ((PointerEvent) -> dynamic)?\n override var onpointerover: ((PointerEvent) -> dynamic)?\n  
override var onpointerout: ((PointerEvent) -> dynamic)?\n override var onpointerenter: ((PointerEvent) ->  
dynamic)?\n override var onpointerleave: ((PointerEvent) -> dynamic)?\n override var oncopy:  
((ClipboardEvent) -> dynamic)?\n override var oncut: ((ClipboardEvent) -> dynamic)?\n override var onpaste:  
((ClipboardEvent) -> dynamic)?\n override var contentEditable: String\n override val isContentEditable:  
Boolean\n override val style: CSSStyleDeclaration\n override val children: HTMLCollection\n override val  
firstElementChild: Element?\n override val lastElementChild: Element?\n override val childElementCount: Int\n

```

    override val previousElementSibling: Element?
    override val nextElementSibling: Element?
    override val assignedSlot: HTMLSlotElement?
    override fun prepend(vararg nodes: dynamic)
    override fun append(vararg nodes: dynamic)
    override fun querySelector(selectors: String): Element?
    override fun querySelectorAll(selectors: String): NodeList
    override fun before(vararg nodes: dynamic)
    override fun after(vararg nodes: dynamic)
    override fun replaceWith(vararg nodes: dynamic)
    override fun remove()
    override fun getBoxQuads(options: BoxQuadOptions /* = definedExternally */): Array<DOMQuad>
    override fun convertQuadFromNode(quad: dynamic, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad
    override fun convertRectFromNode(rect: DOMRectReadOnly, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMQuad
    override fun convertPointFromNode(point: DOMPointInit, from: dynamic, options: ConvertCoordinateOptions /* = definedExternally */): DOMPoint

    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
        val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short
    }
}

public external interface UnionElementOrHTMLCollection
public external interface UnionElementOrRadioNodeList
public external interface UnionHTMLOptGroupElementOrHTMLOptionElement
public external interface UnionAudioTrackOrTextTrackOrVideoTrack
public external interface UnionElementOrMouseEvent
public external interface UnionMessagePortOrWindowProxy
public external interface MediaProvider
public external interface RenderingContext
public external interface HTMLOrSVGImageElement : CanvasImageSource
public external interface CanvasImageSource : ImageBitmapSource
public external interface ImageBitmapSource
public external interface HTMLOrSVGScriptElement

/* please, don't implement this interface! */
@JsName("") @Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external interface DocumentReadyState {
    companion object {
        public inline val DocumentReadyState.Companion.LOADING: DocumentReadyState get() = "loading".asDynamic().unsafeCast<DocumentReadyState>()
        public inline val DocumentReadyState.Companion.INTERACTIVE: DocumentReadyState get() = "interactive".asDynamic().unsafeCast<DocumentReadyState>()
        public inline val DocumentReadyState.Companion.COMPLETE: DocumentReadyState get() = "complete".asDynamic().unsafeCast<DocumentReadyState>()
    }
}

/* please, don't implement this interface! */
@JsName("") @Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external interface CanPlayTypeResult {
    companion object {
        public inline val CanPlayTypeResult.Companion.EMPTY: CanPlayTypeResult get() = ""
        public inline val CanPlayTypeResult.Companion.MAYBE: CanPlayTypeResult get() = "maybe".asDynamic().unsafeCast<CanPlayTypeResult>()
        public inline val CanPlayTypeResult.Companion.PROBABLY: CanPlayTypeResult get() = "probably".asDynamic().unsafeCast<CanPlayTypeResult>()
    }
}

/* please, don't implement this interface! */
@JsName("") @Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external interface TextTrackMode {
    companion object {
        public inline val TextTrackMode.Companion.DISABLED: TextTrackMode get() = "disabled".asDynamic().unsafeCast<TextTrackMode>()
        public inline val TextTrackMode.Companion.HIDDEN: TextTrackMode get() = "hidden".asDynamic().unsafeCast<TextTrackMode>()
    }
}

```

```

TextTrackMode.Companion.SHOWING: TextTrackMode get() =
`showing`.asDynamic().unsafeCast<TextTrackMode>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external
interface TextTrackKind {\n  companion object\n}\n\npublic inline val TextTrackKind.Companion.SUBTITLES:
TextTrackKind get() = `subtitles`.asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.CAPTIONS: TextTrackKind get() =
`captions`.asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.DESCRPTIONS: TextTrackKind get() =
`descriptions`.asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.CHAPTERS: TextTrackKind get() =
`chapters`.asDynamic().unsafeCast<TextTrackKind>()\n\npublic inline val
TextTrackKind.Companion.METADATA: TextTrackKind get() =
`metadata`.asDynamic().unsafeCast<TextTrackKind>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external
interface SelectionMode {\n  companion object\n}\n\npublic inline val SelectionMode.Companion.SELECT:
SelectionMode get() = `select`.asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val
SelectionMode.Companion.START: SelectionMode get() =
`start`.asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val SelectionMode.Companion.END:
SelectionMode get() = `end`.asDynamic().unsafeCast<SelectionMode>()\n\npublic inline val
SelectionMode.Companion.PRESERVE: SelectionMode get() =
`preserve`.asDynamic().unsafeCast<SelectionMode>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external
interface CanvasFillRule {\n  companion object\n}\n\npublic inline val CanvasFillRule.Companion.NONZERO:
CanvasFillRule get() = `nonzero`.asDynamic().unsafeCast<CanvasFillRule>()\n\npublic inline val
CanvasFillRule.Companion.EVENODD: CanvasFillRule get() =
`evenodd`.asDynamic().unsafeCast<CanvasFillRule>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external
interface ImageSmoothingQuality {\n  companion object\n}\n\npublic inline val
ImageSmoothingQuality.Companion.LOW: ImageSmoothingQuality get() =
`low`.asDynamic().unsafeCast<ImageSmoothingQuality>()\n\npublic inline val
ImageSmoothingQuality.Companion.MEDIUM: ImageSmoothingQuality get() =
`medium`.asDynamic().unsafeCast<ImageSmoothingQuality>()\n\npublic inline val
ImageSmoothingQuality.Companion.HIGH: ImageSmoothingQuality get() =
`high`.asDynamic().unsafeCast<ImageSmoothingQuality>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external
interface CanvasLineCap {\n  companion object\n}\n\npublic inline val CanvasLineCap.Companion.BUTT:
CanvasLineCap get() = `butt`.asDynamic().unsafeCast<CanvasLineCap>()\n\npublic inline val
CanvasLineCap.Companion.ROUND: CanvasLineCap get() =
`round`.asDynamic().unsafeCast<CanvasLineCap>()\n\npublic inline val CanvasLineCap.Companion.SQUARE:
CanvasLineCap get() = `square`.asDynamic().unsafeCast<CanvasLineCap>()\n\n/* please, don't implement this
interface! *\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic
external interface CanvasLineJoin {\n  companion object\n}\n\npublic inline val
CanvasLineJoin.Companion.ROUND: CanvasLineJoin get() =
`round`.asDynamic().unsafeCast<CanvasLineJoin>()\n\npublic inline val CanvasLineJoin.Companion.BEVEL:
CanvasLineJoin get() = `bevel`.asDynamic().unsafeCast<CanvasLineJoin>()\n\npublic inline val
CanvasLineJoin.Companion.MITER: CanvasLineJoin get() =
`miter`.asDynamic().unsafeCast<CanvasLineJoin>()\n\n/* please, don't implement this interface!
*\n\n@JsName(`null`)\n\n@Suppress(`NESTED_CLASS_IN_EXTERNAL_INTERFACE`)\n\npublic external

```

```

interface CanvasTextAlign {
    companion object
}

public inline val CanvasTextAlign.Companion.START:
CanvasTextAlign get() = "start".asDynamic().unsafeCast<CanvasTextAlign>()

public inline val
CanvasTextAlign.Companion.END: CanvasTextAlign get() =
"end".asDynamic().unsafeCast<CanvasTextAlign>()

public inline val CanvasTextAlign.Companion.LEFT:
CanvasTextAlign get() = "left".asDynamic().unsafeCast<CanvasTextAlign>()

public inline val
CanvasTextAlign.Companion.RIGHT: CanvasTextAlign get() =
"right".asDynamic().unsafeCast<CanvasTextAlign>()

public inline val
CanvasTextAlign.Companion.CENTER: CanvasTextAlign get() =
"center".asDynamic().unsafeCast<CanvasTextAlign>()

n/* please, don't implement this interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface CanvasTextBaseline {
    companion object
}

public inline val CanvasTextBaseline.Companion.TOP:
CanvasTextBaseline get() = "top".asDynamic().unsafeCast<CanvasTextBaseline>()

public inline val
CanvasTextBaseline.Companion.HANGING: CanvasTextBaseline get() =
"hanging".asDynamic().unsafeCast<CanvasTextBaseline>()

public inline val
CanvasTextBaseline.Companion.MIDDLE: CanvasTextBaseline get() =
"middle".asDynamic().unsafeCast<CanvasTextBaseline>()

public inline val
CanvasTextBaseline.Companion.ALPHABETIC: CanvasTextBaseline get() =
"alphabetic".asDynamic().unsafeCast<CanvasTextBaseline>()

public inline val
CanvasTextBaseline.Companion.IDEOGRAPHIC: CanvasTextBaseline get() =
"ideographic".asDynamic().unsafeCast<CanvasTextBaseline>()

public inline val
CanvasTextBaseline.Companion.BOTTOM: CanvasTextBaseline get() =
"bottom".asDynamic().unsafeCast<CanvasTextBaseline>()

n/* please, don't implement this interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface CanvasDirection {
    companion object
}

public inline val CanvasDirection.Companion.LTR:
CanvasDirection get() = "ltr".asDynamic().unsafeCast<CanvasDirection>()

public inline val
CanvasDirection.Companion.RTL: CanvasDirection get() =
"rtl".asDynamic().unsafeCast<CanvasDirection>()

public inline val CanvasDirection.Companion.INHERIT:
CanvasDirection get() = "inherit".asDynamic().unsafeCast<CanvasDirection>()

n/* please, don't implement this
interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public
external interface ScrollRestoration {
    companion object
}

public inline val
ScrollRestoration.Companion.AUTO: ScrollRestoration get() =
"auto".asDynamic().unsafeCast<ScrollRestoration>()

public inline val
ScrollRestoration.Companion.MANUAL: ScrollRestoration get() =
"manual".asDynamic().unsafeCast<ScrollRestoration>()

n/* please, don't implement this interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface ImageOrientation {
    companion object
}

public inline val ImageOrientation.Companion.NONE:
ImageOrientation get() = "none".asDynamic().unsafeCast<ImageOrientation>()

public inline val
ImageOrientation.Companion.FLIPY: ImageOrientation get() =
"flipY".asDynamic().unsafeCast<ImageOrientation>()

n/* please, don't implement this interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface PremultiplyAlpha {
    companion object
}

public inline val PremultiplyAlpha.Companion.NONE:
PremultiplyAlpha get() = "none".asDynamic().unsafeCast<PremultiplyAlpha>()

public inline val
PremultiplyAlpha.Companion.PREMULTIPLY: PremultiplyAlpha get() =
"premultiply".asDynamic().unsafeCast<PremultiplyAlpha>()

public inline val
PremultiplyAlpha.Companion.DEFAULT: PremultiplyAlpha get() =
"default".asDynamic().unsafeCast<PremultiplyAlpha>()

n/* please, don't implement this interface!
*/

@JsName("null")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external
interface ColorSpaceConversion {
    companion object
}

```

```

ColorSpaceConversion.Companion.NONE: ColorSpaceConversion get() =
    \"none\".asDynamic().unsafeCast<ColorSpaceConversion>()\n\npublic inline val
ColorSpaceConversion.Companion.DEFAULT: ColorSpaceConversion get() =
    \"default\".asDynamic().unsafeCast<ColorSpaceConversion>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ResizeQuality {\n    companion object\n}\n\npublic inline val ResizeQuality.Companion.PIXELATED:
ResizeQuality get() = \"pixelated\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic inline val
ResizeQuality.Companion.LOW: ResizeQuality get() =
    \"low\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic inline val ResizeQuality.Companion.MEDIUM:
ResizeQuality get() = \"medium\".asDynamic().unsafeCast<ResizeQuality>()\n\npublic inline val
ResizeQuality.Companion.HIGH: ResizeQuality get() = \"high\".asDynamic().unsafeCast<ResizeQuality>()\n\n/*
please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface BinaryType {\n    companion object\n}\n\npublic inline val BinaryType.Companion.BLOB: BinaryType
get() = \"blob\".asDynamic().unsafeCast<BinaryType>()\n\npublic inline val
BinaryType.Companion.ARRAYBUFFER: BinaryType get() =
    \"arraybuffer\".asDynamic().unsafeCast<BinaryType>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface WorkerType {\n    companion object\n}\n\npublic inline val WorkerType.Companion.CLASSIC:
WorkerType get() = \"classic\".asDynamic().unsafeCast<WorkerType>()\n\npublic inline val
WorkerType.Companion.MODULE: WorkerType get() =
    \"module\".asDynamic().unsafeCast<WorkerType>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ShadowRootMode {\n    companion object\n}\n\npublic inline val ShadowRootMode.Companion.OPEN:
ShadowRootMode get() = \"open\".asDynamic().unsafeCast<ShadowRootMode>()\n\npublic inline val
ShadowRootMode.Companion.CLOSED: ShadowRootMode get() =
    \"closed\".asDynamic().unsafeCast<ShadowRootMode>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface ScrollBehavior {\n    companion object\n}\n\npublic inline val ScrollBehavior.Companion.AUTO:
ScrollBehavior get() = \"auto\".asDynamic().unsafeCast<ScrollBehavior>()\n\npublic inline val
ScrollBehavior.Companion.INSTANT: ScrollBehavior get() =
    \"instant\".asDynamic().unsafeCast<ScrollBehavior>()\n\npublic inline val ScrollBehavior.Companion.SMOOTH:
ScrollBehavior get() = \"smooth\".asDynamic().unsafeCast<ScrollBehavior>()\n\n/* please, don't implement this
interface! *\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic
external interface ScrollLogicalPosition {\n    companion object\n}\n\npublic inline val
ScrollLogicalPosition.Companion.START: ScrollLogicalPosition get() =
    \"start\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.CENTER: ScrollLogicalPosition get() =
    \"center\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.END: ScrollLogicalPosition get() =
    \"end\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\npublic inline val
ScrollLogicalPosition.Companion.NEAREST: ScrollLogicalPosition get() =
    \"nearest\".asDynamic().unsafeCast<ScrollLogicalPosition>()\n\n/* please, don't implement this interface!
*\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n\npublic external
interface CSSBoxType {\n    companion object\n}\n\npublic inline val CSSBoxType.Companion.MARGIN:
CSSBoxType get() = \"margin\".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val
CSSBoxType.Companion.BORDER: CSSBoxType get() =
    \"border\".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val CSSBoxType.Companion.PADDING:

```

```

CSSBoxType get() = "padding".asDynamic().unsafeCast<CSSBoxType>()\n\npublic inline val
CSSBoxType.Companion.CONTENT: CSSBoxType get() =
"content".asDynamic().unsafeCast<CSSBoxType>()"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n\n//
See github.com/kotlin/dukat for details\n\npackage org.w3c.fetch\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.files.*\nimport org.w3c.xhr.*\n\n/**\n * Exposes the JavaScript
[Headers](https://developer.mozilla.org/en/docs/Web/API/Headers) to Kotlin\n\n * public external open class
Headers(init: dynamic = definedExternally) {\n    fun append(name: String, value: String)\n    fun delete(name:
String)\n    fun get(name: String): String?\n    fun has(name: String): Boolean\n    fun set(name: String, value:
String)\n}\n\n/**\n * Exposes the JavaScript [Body](https://developer.mozilla.org/en/docs/Web/API/Body) to
Kotlin\n\n * public external interface Body {\n    val bodyUsed: Boolean\n    fun arrayBuffer():
Promise<ArrayBuffer>\n    fun blob(): Promise<Blob>\n    fun formData(): Promise<FormData>\n    fun json():
Promise<Any?>\n    fun text(): Promise<String>\n}\n\n/**\n * Exposes the JavaScript
[Request](https://developer.mozilla.org/en/docs/Web/API/Request) to Kotlin\n\n * public external open class
Request(input: dynamic, init: RequestInit = definedExternally) : Body {\n    open val method: String\n    open val
url: String\n    open val headers: Headers\n    open val type: RequestType\n    open val destination:
RequestDestination\n    open val referrer: String\n    open val referrerPolicy: dynamic\n    open val mode:
RequestMode\n    open val credentials: RequestCredentials\n    open val cache: RequestCache\n    open val redirect:
RequestRedirect\n    open val integrity: String\n    open val keepalive: Boolean\n    override val bodyUsed:
Boolean\n    fun clone(): Request\n    override fun arrayBuffer(): Promise<ArrayBuffer>\n    override fun blob():
Promise<Blob>\n    override fun formData(): Promise<FormData>\n    override fun json(): Promise<Any?>\n    override
fun text(): Promise<String>\n}\n\npublic external interface RequestInit {\n    var method: String?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var headers: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n    var body: dynamic\n    get() = definedExternally\n
set(value) = definedExternally\n    var referrer: String?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var referrerPolicy: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n    var mode: RequestMode?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var credentials: RequestCredentials?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var cache: RequestCache?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var redirect: RequestRedirect?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var integrity: String?\n    get() = definedExternally\n    set(value) = definedExternally\n
var keepalive: Boolean?\n    get() = definedExternally\n    set(value) = definedExternally\n    var window:
Any?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun RequestInit(method: String? =
undefined, headers: dynamic = undefined, body: dynamic = undefined, referrer: String? = undefined, referrerPolicy:
dynamic = undefined, mode: RequestMode? = undefined, credentials: RequestCredentials? = undefined, cache:
RequestCache? = undefined, redirect: RequestRedirect? = undefined, integrity: String? = undefined, keepalive:
Boolean? = undefined, window: Any? = undefined): RequestInit {\n    val o = js("{}")\n    o["method"] =
method\n    o["headers"] = headers\n    o["body"] = body\n    o["referrer"] = referrer\n    o["referrerPolicy"] =
referrerPolicy\n    o["mode"] = mode\n    o["credentials"] = credentials\n    o["cache"] = cache\n    o["redirect"]
= redirect\n    o["integrity"] = integrity\n    o["keepalive"] = keepalive\n    o["window"] = window\n    return
o\n}\n\n/**\n * Exposes the JavaScript [Response](https://developer.mozilla.org/en/docs/Web/API/Response) to
Kotlin\n\n * public external open class Response(body: dynamic = definedExternally, init: ResponseInit =
definedExternally) : Body {\n    open val type: ResponseType\n    open val url: String\n    open val redirected:
Boolean\n    open val status: Short\n    open val ok: Boolean\n    open val statusText: String\n    open val headers:
Headers\n    open val body: dynamic\n    open val trailer: Promise<Headers>\n    override val bodyUsed: Boolean\n

```

```

fun clone(): Response\n    override fun arrayBuffer(): Promise<ArrayBuffer>\n    override fun blob():
Promise<Blob>\n    override fun formData(): Promise<FormData>\n    override fun json(): Promise<Any?>\n
override fun text(): Promise<String>\n\n    companion object {\n        fun error(): Response\n        fun redirect(url:
String, status: Short = definedExternally): Response\n    }\n\n    public external interface ResponseInit {\n        var
status: Short? /* = 200 */\n        get() = definedExternally\n        set(value) = definedExternally\n        var statusText:
String? /* = \"OK\" */\n        get() = definedExternally\n        set(value) = definedExternally\n        var headers:
dynamic\n        get() = definedExternally\n        set(value) =
definedExternally\n    }\n\n    @Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n    @kotlin.internal.InlineOnly\n    public inline fun ResponseInit(status: Short? = 200,
statusText: String? = \"OK\", headers: dynamic = undefined): ResponseInit {\n        val o = js(\"({})\")\n        o[\"status\"]
= status\n        o[\"statusText\"] = statusText\n        o[\"headers\"] = headers\n        return o\n    }\n\n    /* please, don't implement
this interface! */\n    @JsName(\"null\")\n    @Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n    public external
interface RequestType {\n        companion object\n    }\n\n    public inline val RequestType.Companion.EMPTY:
RequestType get() = \"\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val
RequestType.Companion.AUDIO: RequestType get() =
\"audio\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val RequestType.Companion.FONT:
RequestType get() = \"font\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val
RequestType.Companion.IMAGE: RequestType get() =
\"image\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val RequestType.Companion.SCRIPT:
RequestType get() = \"script\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val
RequestType.Companion.STYLE: RequestType get() =
\"style\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val RequestType.Companion.TRACK:
RequestType get() = \"track\".asDynamic().unsafeCast<RequestType>()\n\n    public inline val
RequestType.Companion.VIDEO: RequestType get() = \"video\".asDynamic().unsafeCast<RequestType>()\n\n    /*
please, don't implement this interface!
*/\n    @JsName(\"null\")\n    @Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\n    public external
interface RequestDestination {\n        companion object\n    }\n\n    public inline val
RequestDestination.Companion.EMPTY: RequestDestination get() =
\"\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.DOCUMENT: RequestDestination get() =
\"document\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.EMBED: RequestDestination get() =
\"embed\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.FONT: RequestDestination get() =
\"font\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.IMAGE: RequestDestination get() =
\"image\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.MANIFEST: RequestDestination get() =
\"manifest\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.MEDIA: RequestDestination get() =
\"media\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.OBJECT: RequestDestination get() =
\"object\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.REPORT: RequestDestination get() =
\"report\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.SCRIPT: RequestDestination get() =
\"script\".asDynamic().unsafeCast<RequestDestination>()\n\n    public inline val
RequestDestination.Companion.SERVICEWORKER: RequestDestination get() =

```

```

"serviceworker".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.SHAREDWORKER: RequestDestination get() =
"sharedworker".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.STYLE: RequestDestination get() =
"style".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.WORKER: RequestDestination get() =
"worker".asDynamic().unsafeCast<RequestDestination>()\n\npublic inline val
RequestDestination.Companion.XSLT: RequestDestination get() =
"xslt".asDynamic().unsafeCast<RequestDestination>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface RequestMode {\n  companion object\n}\n\npublic inline val RequestMode.Companion.NAVIGATE:
RequestMode get() = "navigate".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val
RequestMode.Companion.SAME_ORIGIN: RequestMode get() = "same-
origin".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val RequestMode.Companion.NO_CORS:
RequestMode get() = "no-cors".asDynamic().unsafeCast<RequestMode>()\n\npublic inline val
RequestMode.Companion.CORS: RequestMode get() = "cors".asDynamic().unsafeCast<RequestMode>()\n\n/*
please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface RequestCredentials {\n  companion object\n}\n\npublic inline val RequestCredentials.Companion.OMIT:
RequestCredentials get() = "omit".asDynamic().unsafeCast<RequestCredentials>()\n\npublic inline val
RequestCredentials.Companion.SAME_ORIGIN: RequestCredentials get() = "same-
origin".asDynamic().unsafeCast<RequestCredentials>()\n\npublic inline val
RequestCredentials.Companion.INCLUDE: RequestCredentials get() =
"include".asDynamic().unsafeCast<RequestCredentials>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface RequestCache {\n  companion object\n}\n\npublic inline val RequestCache.Companion.DEFAULT:
RequestCache get() = "default".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.NO_STORE: RequestCache get() = "no-
store".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val RequestCache.Companion.RELOAD:
RequestCache get() = "reload".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.NO_CACHE: RequestCache get() = "no-
cache".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.FORCE_CACHE: RequestCache get() = "force-
cache".asDynamic().unsafeCast<RequestCache>()\n\npublic inline val
RequestCache.Companion.ONLY_IF_CACHED: RequestCache get() = "only-if-
cached".asDynamic().unsafeCast<RequestCache>()\n\n/* please, don't implement this interface!
*\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external
interface RequestRedirect {\n  companion object\n}\n\npublic inline val RequestRedirect.Companion.FOLLOW:
RequestRedirect get() = "follow".asDynamic().unsafeCast<RequestRedirect>()\n\npublic inline val
RequestRedirect.Companion.ERROR: RequestRedirect get() =
"error".asDynamic().unsafeCast<RequestRedirect>()\n\npublic inline val RequestRedirect.Companion.MANUAL:
RequestRedirect get() = "manual".asDynamic().unsafeCast<RequestRedirect>()\n\n/* please, don't implement this
interface! *\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic
external interface ResponseType {\n  companion object\n}\n\npublic inline val ResponseType.Companion.BASIC:
ResponseType get() = "basic".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val
ResponseType.Companion.CORS: ResponseType get() =
"cors".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val ResponseType.Companion.DEFAULT:
ResponseType get() = "default".asDynamic().unsafeCast<ResponseType>()\n\npublic inline val

```



```

deviceId: Boolean? = true, groupId: Boolean? = true): MediaTrackSupportedConstraints {
    val o = js("{}")
    o["width"] = width
    o["height"] = height
    o["aspectRatio"] = aspectRatio
    o["frameRate"] = frameRate
    o["facingMode"] = facingMode
    o["resizeMode"] = resizeMode
    o["volume"] = volume
    o["sampleRate"] = sampleRate
    o["sampleSize"] = sampleSize
    o["echoCancellation"] = echoCancellation
    o["autoGainControl"] = autoGainControl
    o["noiseSuppression"] = noiseSuppression
    o["latency"] = latency
    o["channelCount"] = channelCount
    o["deviceId"] = deviceId
    o["groupId"] = groupId
    return o
}

public external interface MediaTrackCapabilities {
    var width: ULongRange?
    get() = definedExternally
    set(value) = definedExternally
    var height: ULongRange?
    get() = definedExternally
    set(value) = definedExternally
    var aspectRatio: DoubleRange?
    get() = definedExternally
    set(value) = definedExternally
    var frameRate: DoubleRange?
    get() = definedExternally
    set(value) = definedExternally
    var facingMode: Array<String>?
    get() = definedExternally
    set(value) = definedExternally
    var resizeMode: Array<String>?
    get() = definedExternally
    set(value) = definedExternally
    var volume: DoubleRange?
    get() = definedExternally
    set(value) = definedExternally
    var sampleRate: ULongRange?
    get() = definedExternally
    set(value) = definedExternally
    var sampleSize: ULongRange?
    get() = definedExternally
    set(value) = definedExternally
    var echoCancellation: Array<Boolean>?
    get() = definedExternally
    set(value) = definedExternally
    var autoGainControl: Array<Boolean>?
    get() = definedExternally
    set(value) = definedExternally
    var noiseSuppression: Array<Boolean>?
    get() = definedExternally
    set(value) = definedExternally
    var latency: DoubleRange?
    get() = definedExternally
    set(value) = definedExternally
    var channelCount: ULongRange?
    get() = definedExternally
    set(value) = definedExternally
    var deviceId: String?
    get() = definedExternally
    set(value) = definedExternally
    var groupId: String?
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun MediaTrackCapabilities(
    width: ULongRange? = undefined,
    height: ULongRange? = undefined,
    aspectRatio: DoubleRange? = undefined,
    frameRate: DoubleRange? = undefined,
    facingMode: Array<String>? = undefined,
    resizeMode: Array<String>? = undefined,
    volume: DoubleRange? = undefined,
    sampleRate: ULongRange? = undefined,
    sampleSize: ULongRange? = undefined,
    echoCancellation: Array<Boolean>? = undefined,
    autoGainControl: Array<Boolean>? = undefined,
    noiseSuppression: Array<Boolean>? = undefined,
    latency: DoubleRange? = undefined,
    channelCount: ULongRange? = undefined,
    deviceId: String? = undefined,
    groupId: String? = undefined): MediaTrackCapabilities {
    val o = js("{}")
    o["width"] = width
    o["height"] = height
    o["aspectRatio"] = aspectRatio
    o["frameRate"] = frameRate
    o["facingMode"] = facingMode
    o["resizeMode"] = resizeMode
    o["volume"] = volume
    o["sampleRate"] = sampleRate
    o["sampleSize"] = sampleSize
    o["echoCancellation"] = echoCancellation
    o["autoGainControl"] = autoGainControl
    o["noiseSuppression"] = noiseSuppression
    o["latency"] = latency
    o["channelCount"] = channelCount
    o["deviceId"] = deviceId
    o["groupId"] = groupId
    return o
}

/** Exposes the JavaScript [MediaTrackConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaTrackConstraints) to Kotlin */
public external interface MediaTrackConstraints : MediaTrackConstraintSet {
    var advanced: Array<MediaTrackConstraintSet>?
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun MediaTrackConstraints(
    advanced: Array<MediaTrackConstraintSet>? = undefined,
    width: dynamic = undefined,
    height: dynamic = undefined,
    aspectRatio: dynamic = undefined,
    frameRate: dynamic = undefined,
    facingMode: dynamic = undefined,
    resizeMode: dynamic = undefined,
    volume: dynamic = undefined,
    sampleRate: dynamic = undefined,
    sampleSize: dynamic = undefined,
    echoCancellation: dynamic = undefined,
    autoGainControl: dynamic = undefined,
    noiseSuppression: dynamic = undefined,
    latency: dynamic = undefined,
    channelCount: dynamic = undefined,
    deviceId: dynamic = undefined,
    groupId: dynamic = undefined): MediaTrackConstraints {
    val o = js("{}")
    o["advanced"] = advanced
    o["width"] = width
    o["height"] = height
    o["aspectRatio"] =

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aspectRatio\n  o[\"frameRate\"] = frameRate\n  o[\"facingMode\"] = facingMode\n  o[\"resizeMode\"] =
resizeMode\n  o[\"volume\"] = volume\n  o[\"sampleRate\"] = sampleRate\n  o[\"sampleSize\"] = sampleSize\n
o[\"echoCancellation\"] = echoCancellation\n  o[\"autoGainControl\"] = autoGainControl\n
o[\"noiseSuppression\"] = noiseSuppression\n  o[\"latency\"] = latency\n  o[\"channelCount\"] = channelCount\n
o[\"deviceId\"] = deviceId\n  o[\"groupId\"] = groupId\n  return o\n}\n\npublic external interface
MediaTrackConstraintSet {\n  var width: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var height: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n
var aspectRatio: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n  var frameRate:
dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n  var facingMode: dynamic\n
get() = definedExternally\n    set(value) = definedExternally\n  var resizeMode: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n  var volume: dynamic\n    get() = definedExternally\n
set(value) = definedExternally\n  var sampleRate: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var sampleSize: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var echoCancellation: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var autoGainControl: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var noiseSuppression: dynamic\n    get() = definedExternally\n    set(value) =
definedExternally\n  var latency: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n
var channelCount: dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n  var deviceId:
dynamic\n    get() = definedExternally\n    set(value) = definedExternally\n  var groupId: dynamic\n    get()
= definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackConstraintSet(width:
dynamic = undefined, height: dynamic = undefined, aspectRatio: dynamic = undefined, frameRate: dynamic =
undefined, facingMode: dynamic = undefined, resizeMode: dynamic = undefined, volume: dynamic = undefined,
sampleRate: dynamic = undefined, sampleSize: dynamic = undefined, echoCancellation: dynamic = undefined,
autoGainControl: dynamic = undefined, noiseSuppression: dynamic = undefined, latency: dynamic = undefined,
channelCount: dynamic = undefined, deviceId: dynamic = undefined, groupId: dynamic = undefined):
MediaTrackConstraintSet {\n  val o = js(\"{\}\")\n  o[\"width\"] = width\n  o[\"height\"] = height\n
o[\"aspectRatio\"] = aspectRatio\n  o[\"frameRate\"] = frameRate\n  o[\"facingMode\"] = facingMode\n
o[\"resizeMode\"] = resizeMode\n  o[\"volume\"] = volume\n  o[\"sampleRate\"] = sampleRate\n
o[\"sampleSize\"] = sampleSize\n  o[\"echoCancellation\"] = echoCancellation\n  o[\"autoGainControl\"] =
autoGainControl\n  o[\"noiseSuppression\"] = noiseSuppression\n  o[\"latency\"] = latency\n
o[\"channelCount\"] = channelCount\n  o[\"deviceId\"] = deviceId\n  o[\"groupId\"] = groupId\n  return
o\n}\n\n/**\n * Exposes the JavaScript
[MediaTrackSettings](https://developer.mozilla.org/en/docs/Web/API/MediaTrackSettings) to Kotlin\n *\npublic
external interface MediaTrackSettings {\n  var width: Int?\n    get() = definedExternally\n    set(value) =
definedExternally\n  var height: Int?\n    get() = definedExternally\n    set(value) = definedExternally\n
var aspectRatio: Double?\n    get() = definedExternally\n    set(value) = definedExternally\n  var frameRate:
Double?\n    get() = definedExternally\n    set(value) = definedExternally\n  var facingMode: String?\n
get() = definedExternally\n    set(value) = definedExternally\n  var resizeMode: String?\n    get() =
definedExternally\n    set(value) = definedExternally\n  var volume: Double?\n    get() = definedExternally\n
set(value) = definedExternally\n  var sampleRate: Int?\n    get() = definedExternally\n    set(value) =
definedExternally\n  var sampleSize: Int?\n    get() = definedExternally\n    set(value) = definedExternally\n
var echoCancellation: Boolean?\n    get() = definedExternally\n    set(value) = definedExternally\n  var
autoGainControl: Boolean?\n    get() = definedExternally\n    set(value) = definedExternally\n  var
noiseSuppression: Boolean?\n    get() = definedExternally\n    set(value) = definedExternally\n  var latency:
Double?\n    get() = definedExternally\n    set(value) = definedExternally\n  var channelCount: Int?\n
get() = definedExternally\n    set(value) = definedExternally\n  var deviceId: String?\n    get() =
definedExternally\n    set(value) = definedExternally\n  var groupId: String?\n    get() = definedExternally\n

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    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MediaTrackSettings(width: Int? =
undefined, height: Int? = undefined, aspectRatio: Double? = undefined, frameRate: Double? = undefined,
facingMode: String? = undefined, resizeMode: String? = undefined, volume: Double? = undefined, sampleRate: Int?
= undefined, sampleSize: Int? = undefined, echoCancellation: Boolean? = undefined, autoGainControl: Boolean? =
undefined, noiseSuppression: Boolean? = undefined, latency: Double? = undefined, channelCount: Int? = undefined,
deviceId: String? = undefined, groupId: String? = undefined): MediaTrackSettings {\n    val o = js("{}")\n
o["width"] = width\n    o["height"] = height\n    o["aspectRatio"] = aspectRatio\n    o["frameRate"] =
frameRate\n    o["facingMode"] = facingMode\n    o["resizeMode"] = resizeMode\n    o["volume"] = volume\n
o["sampleRate"] = sampleRate\n    o["sampleSize"] = sampleSize\n    o["echoCancellation"] =
echoCancellation\n    o["autoGainControl"] = autoGainControl\n    o["noiseSuppression"] = noiseSuppression\n
o["latency"] = latency\n    o["channelCount"] = channelCount\n    o["deviceId"] = deviceId\n    o["groupId"] =
groupId\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MediaStreamTrackEvent](https://developer.mozilla.org/en/docs/Web/API/MediaStreamTrackEvent) to Kotlin\n
*/\npublic external open class MediaStreamTrackEvent(type: String, eventInitDict: MediaStreamTrackEventInit) :
Event {\n    open val track: MediaStreamTrack\n\n    companion object {\n        val NONE: Short\n        val
CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n
    }\n\n    public external interface MediaStreamTrackEventInit : EventInit {\n        var track:
MediaStreamTrack?\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MediaStreamTrackEventInit(track:
MediaStreamTrack?, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
MediaStreamTrackEventInit {\n    val o = js("{}")\n    o["track"] = track\n    o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n    o["composed"] = composed\n    return o\n}\n\npublic external open class
OverconstrainedErrorEvent(type: String, eventInitDict: OverconstrainedErrorEventInit) : Event {\n    open val error:
dynamic\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val
AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n
    }\n\n    public external interface
OverconstrainedErrorEventInit : EventInit {\n        var error: dynamic /* = null */\n        get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun OverconstrainedErrorEventInit(error:
dynamic = null, bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false):
OverconstrainedErrorEventInit {\n    val o = js("{}")\n    o["error"] = error\n    o["bubbles"] = bubbles\n
o["cancelable"] = cancelable\n    o["composed"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[MediaDevices](https://developer.mozilla.org/en/docs/Web/API/MediaDevices) to Kotlin\n
*/\npublic external
abstract class MediaDevices : EventTarget {\n    open var ondevicechange: ((Event) -> dynamic)?\n    fun
enumerateDevices(): Promise<Array<MediaDeviceInfo>>\n    fun getSupportedConstraints():
MediaTrackSupportedConstraints\n    fun getUserMedia(constraints: MediaStreamConstraints = definedExternally):
Promise<MediaStream>\n}\n\n/**\n * Exposes the JavaScript
[MediaDeviceInfo](https://developer.mozilla.org/en/docs/Web/API/MediaDeviceInfo) to Kotlin\n
*/\npublic
external abstract class MediaDeviceInfo {\n    open val deviceId: String\n    open val kind: MediaDeviceKind\n
open val label: String\n    open val groupId: String\n    fun toJSON(): dynamic\n}\n\npublic external abstract class
InputDeviceInfo : MediaDeviceInfo {\n    fun getCapabilities(): MediaTrackCapabilities\n}\n\n/**\n * Exposes the
JavaScript [MediaStreamConstraints](https://developer.mozilla.org/en/docs/Web/API/MediaStreamConstraints) to
Kotlin\n
*/\npublic external interface MediaStreamConstraints {\n    var video: dynamic /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n    var audio: dynamic /* = false */\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun MediaStreamConstraints(video:
dynamic = false, audio: dynamic = false): MediaStreamConstraints {\n    val o = js("{}")\n    o["video"] =
video\n    o["audio"] = audio\n    return o\n}\n\npublic external interface ConstrainsablePattern {\n    var

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onoverconstrained: ((Event) -> dynamic)?\n    get() = definedExternally\n    set(value) = definedExternally\n
fun getCapabilities(): Capabilities\n fun getConstraints(): Constraints\n fun getSettings(): Settings\n fun
applyConstraints(constraints: Constraints = definedExternally): Promise<Unit>\n}\n\n**\n * Exposes the
JavaScript [DoubleRange](https://developer.mozilla.org/en/docs/Web/API/DoubleRange) to Kotlin\n *\npublic
external interface DoubleRange {\n    var max: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n    var min: Double?\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun DoubleRange(max: Double? =
undefined, min: Double? = undefined): DoubleRange {\n    val o = js("{}")\n    o["max"] = max\n    o["min"] =
min\n    return o\n}\n\npublic external interface ConstrainDoubleRange : DoubleRange {\n    var exact: Double?\n
get() = definedExternally\n    set(value) = definedExternally\n    var ideal: Double?\n    get() =
definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainDoubleRange(exact: Double?
= undefined, ideal: Double? = undefined, max: Double? = undefined, min: Double? = undefined):
ConstrainDoubleRange {\n    val o = js("{}")\n    o["exact"] = exact\n    o["ideal"] = ideal\n    o["max"] =
max\n    o["min"] = min\n    return o\n}\n\npublic external interface ULongRange {\n    var max: Int?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var min: Int?\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ULongRange(max: Int? = undefined,
min: Int? = undefined): ULongRange {\n    val o = js("{}")\n    o["max"] = max\n    o["min"] = min\n    return
o\n}\n\npublic external interface ConstrainULongRange : ULongRange {\n    var exact: Int?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var ideal: Int?\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainULongRange(exact: Int? =
undefined, ideal: Int? = undefined, max: Int? = undefined, min: Int? = undefined): ConstrainULongRange {\n
    val o = js("{}")\n    o["exact"] = exact\n    o["ideal"] = ideal\n    o["max"] = max\n    o["min"] = min\n
return o\n}\n\n**\n * Exposes the JavaScript
[ConstrainBooleanParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainBooleanParameters) to
Kotlin\n *\npublic external interface ConstrainBooleanParameters {\n    var exact: Boolean?\n    get() =
definedExternally\n    set(value) = definedExternally\n    var ideal: Boolean?\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ConstrainBooleanParameters(exact:
Boolean? = undefined, ideal: Boolean? = undefined): ConstrainBooleanParameters {\n    val o = js("{}")\n
o["exact"] = exact\n    o["ideal"] = ideal\n    return o\n}\n\n**\n * Exposes the JavaScript
[ConstrainDOMStringParameters](https://developer.mozilla.org/en/docs/Web/API/ConstrainDOMStringParameters)
to Kotlin\n *\npublic external interface ConstrainDOMStringParameters {\n    var exact: dynamic\n    get() =
definedExternally\n    set(value) = definedExternally\n    var ideal: dynamic\n    get() = definedExternally\n
set(value) = definedExternally\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun
ConstrainDOMStringParameters(exact: dynamic = undefined, ideal: dynamic = undefined):
ConstrainDOMStringParameters {\n    val o = js("{}")\n    o["exact"] = exact\n    o["ideal"] = ideal\n    return
o\n}\n\npublic external interface Capabilities\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun Capabilities(): Capabilities {\n    val o
= js("{}")\n    return o\n}\n\npublic external interface Settings\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun Settings(): Settings {\n    val o =
js("{}")\n    return o\n}\n\npublic external interface ConstraintSet\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun ConstraintSet(): ConstraintSet {\n
    val o = js("{}")\n    return o\n}\n\npublic external interface Constraints : ConstraintSet {\n    var advanced:

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Array<ConstraintSet>? \n    get() = definedExternally \n    set(value) =
definedExternally \n} \n \n @Suppress(\ "INVISIBLE_REFERENCE",
\ "INVISIBLE_MEMBER" ) \n @kotlin.internal.InlineOnly \n public inline fun Constraints(advanced:
Array<ConstraintSet>? = undefined): Constraints { \n    val o = js(\ "{ }" ) \n    o[ \ "advanced" ] = advanced \n
return o \n} \n \n /* please, don't implement this interface!
*\n @JsName(\ "null" ) \n @Suppress(\ "NESTED_CLASS_IN_EXTERNAL_INTERFACE" ) \n public external
interface MediaStreamTrackState { \n    companion object \n} \n \n public inline val
MediaStreamTrackState.Companion.LIVE: MediaStreamTrackState get() =
\ "live" .asDynamic().unsafeCast<MediaStreamTrackState>() \n \n public inline val
MediaStreamTrackState.Companion.ENDED: MediaStreamTrackState get() =
\ "ended" .asDynamic().unsafeCast<MediaStreamTrackState>() \n \n /* please, don't implement this interface!
*\n @JsName(\ "null" ) \n @Suppress(\ "NESTED_CLASS_IN_EXTERNAL_INTERFACE" ) \n public external
interface VideoFacingModeEnum { \n    companion object \n} \n \n public inline val
VideoFacingModeEnum.Companion.USER: VideoFacingModeEnum get() =
\ "user" .asDynamic().unsafeCast<VideoFacingModeEnum>() \n \n public inline val
VideoFacingModeEnum.Companion.ENVIRONMENT: VideoFacingModeEnum get() =
\ "environment" .asDynamic().unsafeCast<VideoFacingModeEnum>() \n \n public inline val
VideoFacingModeEnum.Companion.LEFT: VideoFacingModeEnum get() =
\ "left" .asDynamic().unsafeCast<VideoFacingModeEnum>() \n \n public inline val
VideoFacingModeEnum.Companion.RIGHT: VideoFacingModeEnum get() =
\ "right" .asDynamic().unsafeCast<VideoFacingModeEnum>() \n \n /* please, don't implement this interface!
*\n @JsName(\ "null" ) \n @Suppress(\ "NESTED_CLASS_IN_EXTERNAL_INTERFACE" ) \n public external
interface VideoResizeModeEnum { \n    companion object \n} \n \n public inline val
VideoResizeModeEnum.Companion.NONE: VideoResizeModeEnum get() =
\ "none" .asDynamic().unsafeCast<VideoResizeModeEnum>() \n \n public inline val
VideoResizeModeEnum.Companion.CROP_AND_SCALE: VideoResizeModeEnum get() = \ "crop-and-
scale" .asDynamic().unsafeCast<VideoResizeModeEnum>() \n \n /* please, don't implement this interface!
*\n @JsName(\ "null" ) \n @Suppress(\ "NESTED_CLASS_IN_EXTERNAL_INTERFACE" ) \n public external
interface MediaDeviceKind { \n    companion object \n} \n \n public inline val
MediaDeviceKind.Companion.AUDIOINPUT: MediaDeviceKind get() =
\ "audioinput" .asDynamic().unsafeCast<MediaDeviceKind>() \n \n public inline val
MediaDeviceKind.Companion.AUDIOOUTPUT: MediaDeviceKind get() =
\ "audiooutput" .asDynamic().unsafeCast<MediaDeviceKind>() \n \n public inline val
MediaDeviceKind.Companion.VIDEOINPUT: MediaDeviceKind get() =
\ "videoinput" .asDynamic().unsafeCast<MediaDeviceKind>() ) , /* \n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors. \n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file. \n * \n // NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT! \n // See github.com/kotlin/dukat for details \n \n package org.w3c.dom.mediasource \n \n import
kotlin.js.* \n import org.khronos.webgl.* \n import org.w3c.dom.* \n import org.w3c.dom.events.* \n \n /** \n * Exposes
the JavaScript [MediaSource](https://developer.mozilla.org/en/docs/Web/API/MediaSource) to Kotlin \n * \n public
external open class MediaSource : EventTarget, MediaProvider { \n    open val sourceBuffers: SourceBufferList \n
open val activeSourceBuffers: SourceBufferList \n    open val readyState: ReadyState \n    var duration: Double \n
var onsourceopen: ((Event) -> dynamic)? \n    var onsourceended: ((Event) -> dynamic)? \n    var onsourceclose:
((Event) -> dynamic)? \n    fun addSourceBuffer(type: String): SourceBuffer \n    fun
removeSourceBuffer(sourceBuffer: SourceBuffer) \n    fun endOfStream(error: EndOfStreamError =
definedExternally) \n    fun setLiveSeekableRange(start: Double, end: Double) \n    fun clearLiveSeekableRange() \n} \n \n
companion object { \n    fun isTypeSupported(type: String): Boolean \n } \n} \n \n /** \n * Exposes the JavaScript
[SourceBuffer](https://developer.mozilla.org/en/docs/Web/API/SourceBuffer) to Kotlin \n * \n public external

```

```

abstract class SourceBuffer : EventTarget {\n  open var mode: AppendMode\n  open val updating: Boolean\n  open val buffered: TimeRanges\n  open var timestampOffset: Double\n  open val audioTracks: AudioTrackList\n  open val videoTracks: VideoTrackList\n  open val textTracks: TextTrackList\n  open var appendWindowStart: Double\n  open var appendWindowEnd: Double\n  open var onupdatestart: ((Event) -> dynamic)?\n  open var onupdate: ((Event) -> dynamic)?\n  open var onupdateend: ((Event) -> dynamic)?\n  open var onerror: ((Event) -> dynamic)?\n  open var onabort: ((Event) -> dynamic)?\n  fun appendBuffer(data: dynamic)\n  fun abort()\n  fun remove(start: Double, end: Double)\n}\n\n/**\n * Exposes the JavaScript [SourceBufferList](https://developer.mozilla.org/en/docs/Web/API/SourceBufferList) to Kotlin\n */\n\npublic external abstract class SourceBufferList : EventTarget {\n  open val length: Int\n  open var onaddsourcebuffer: ((Event) -> dynamic)?\n  open var onremovesourcebuffer: ((Event) -> dynamic)?\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\", \"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun SourceBufferList.get(index: Int): SourceBuffer? = asDynamic()[index]\n\n/* please, don't implement this interface! */\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external interface ReadyState {\n  companion object\n}\n\npublic inline val ReadyState.Companion.CLOSED: ReadyState get() = \"closed\".asDynamic().unsafeCast<ReadyState>()\n\npublic inline val ReadyState.Companion.OPEN: ReadyState get() = \"open\".asDynamic().unsafeCast<ReadyState>()\n\npublic inline val ReadyState.Companion.ENDED: ReadyState get() = \"ended\".asDynamic().unsafeCast<ReadyState>()\n\n/* please, don't implement this interface! */\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external interface EndOfStreamError {\n  companion object\n}\n\npublic inline val EndOfStreamError.Companion.NETWORK: EndOfStreamError get() = \"network\".asDynamic().unsafeCast<EndOfStreamError>()\n\npublic inline val EndOfStreamError.Companion.DECODE: EndOfStreamError get() = \"decode\".asDynamic().unsafeCast<EndOfStreamError>()\n\n/* please, don't implement this interface! */\n\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external interface AppendMode {\n  companion object\n}\n\npublic inline val AppendMode.Companion.SEGMENTS: AppendMode get() = \"segments\".asDynamic().unsafeCast<AppendMode>()\n\npublic inline val AppendMode.Companion.SEQUENCE: AppendMode get() = \"sequence\".asDynamic().unsafeCast<AppendMode>()\n\n/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n/*\n * NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n */\n\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.dom.pointerevents\n\nimport kotlin.js.*\nimport org.khronos.webgl.*\nimport org.w3c.dom.*\nimport org.w3c.dom.events.*\n\npublic external interface PointerEventInit : MouseEventInit {\n  var pointerId: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var width: Double? /* = 1.0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var height: Double? /* = 1.0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var pressure: Float? /* = 0f */\n  get() = definedExternally\n  set(value) = definedExternally\n  var tangentialPressure: Float? /* = 0f */\n  get() = definedExternally\n  set(value) = definedExternally\n  var tiltX: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var tiltY: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var twist: Int? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var pointerType: String? /* = \"\" */\n  get() = definedExternally\n  set(value) = definedExternally\n  var isPrimary: Boolean? /* = false */\n  get() = definedExternally\n  set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\", \"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun PointerEventInit(pointerId: Int? = 0, width: Double? = 1.0, height: Double? = 1.0, pressure: Float? = 0f, tangentialPressure: Float? = 0f, tiltX: Int? = 0, tiltY: Int? = 0, twist: Int? = 0, pointerType: String? = \"\", isPrimary: Boolean? = false, screenX: Int? = 0, screenY: Int? = 0, clientX: Int? = 0, clientY: Int? = 0, button: Short? = 0, buttons: Short? = 0, relatedTarget: EventTarget? =

```

```

null, region: String? = null, ctrlKey: Boolean? = false, shiftKey: Boolean? = false, altKey: Boolean? = false,
metaKey: Boolean? = false, modifierAltGraph: Boolean? = false, modifierCapsLock: Boolean? = false, modifierFn:
Boolean? = false, modifierFnLock: Boolean? = false, modifierHyper: Boolean? = false, modifierNumLock:
Boolean? = false, modifierScrollLock: Boolean? = false, modifierSuper: Boolean? = false, modifierSymbol:
Boolean? = false, modifierSymbolLock: Boolean? = false, view: Window? = null, detail: Int? = 0, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): PointerEventInit {
    val o = js("{}")
    o["pointerId"] = pointerId
    o["width"] = width
    o["height"] = height
    o["pressure"] = pressure
    o["tangentialPressure"] = tangentialPressure
    o["tiltX"] = tiltX
    o["tiltY"] = tiltY
    o["twist"] = twist
    o["pointerType"] = pointerType
    o["isPrimary"] = isPrimary
    o["screenX"] = screenX
    o["screenY"] = screenY
    o["clientX"] = clientX
    o["clientY"] = clientY
    o["button"] = button
    o["buttons"] = buttons
    o["relatedTarget"] = relatedTarget
    o["region"] = region
    o["ctrlKey"] = ctrlKey
    o["shiftKey"] = shiftKey
    o["altKey"] = altKey
    o["metaKey"] = metaKey
    o["modifierAltGraph"] = modifierAltGraph
    o["modifierCapsLock"] = modifierCapsLock
    o["modifierFn"] = modifierFn
    o["modifierFnLock"] = modifierFnLock
    o["modifierHyper"] = modifierHyper
    o["modifierNumLock"] = modifierNumLock
    o["modifierScrollLock"] = modifierScrollLock
    o["modifierSuper"] = modifierSuper
    o["modifierSymbol"] = modifierSymbol
    o["modifierSymbolLock"] = modifierSymbolLock
    o["view"] = view
    o["detail"] = detail
    o["bubbles"] = bubbles
    o["cancelable"] = cancelable
    o["composed"] = composed
    return o
}

```

\* Exposes the JavaScript

[PointerEvent](<https://developer.mozilla.org/en/docs/Web/API/PointerEvent>) to Kotlin

```

public external open class PointerEvent(type: String, eventInitDict: PointerEventInit = definedExternally) : MouseEvent {
    open val pointerId: Int
    open val width: Double
    open val height: Double
    open val pressure: Float
    open val tangentialPressure: Float
    open val tiltX: Int
    open val tiltY: Int
    open val twist: Int
    open val pointerType: String
    open val isPrimary: Boolean
}

```

companion object {
 val NONE: Short
 val CAPTURING\_PHASE: Short
 val AT\_TARGET: Short
 val BUBBLING\_PHASE: Short
}

\* Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.
\* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
\* NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!
\* See [github.com/kotlin/dukat](https://github.com/kotlin/dukat) for details

```

package org.w3c.dom.svg
import kotlin.js.*
import org.khronos.webgl.*
import org.w3c.dom.*
import org.w3c.dom.css.*

```

\* Exposes the JavaScript

[SVGElement](<https://developer.mozilla.org/en/docs/Web/API/SVGElement>) to Kotlin

```

public external abstract class SVGElement : Element, ElementCSSInlineStyle, GlobalEventHandlers, SVGElementInstance {
    open val dataset: DOMStringMap
    open val ownerSVGElement: SVGSVGElement?
    open val viewportElement: SVGElement?
    open var tabIndex: Int
    fun focus()
    fun blur()
}

```

companion object {
 val ELEMENT\_NODE: Short
 val ATTRIBUTE\_NODE: Short
 val TEXT\_NODE: Short
 val CDATA\_SECTION\_NODE: Short
 val ENTITY\_REFERENCE\_NODE: Short
 val ENTITY\_NODE: Short
 val PROCESSING\_INSTRUCTION\_NODE: Short
 val COMMENT\_NODE: Short
 val DOCUMENT\_NODE: Short
 val DOCUMENT\_TYPE\_NODE: Short
 val DOCUMENT\_FRAGMENT\_NODE: Short
 val NOTATION\_NODE: Short
 val DOCUMENT\_POSITION\_DISCONNECTED: Short
 val DOCUMENT\_POSITION\_PRECEDING: Short
 val DOCUMENT\_POSITION\_FOLLOWING: Short
 val DOCUMENT\_POSITION\_CONTAINS: Short
 val DOCUMENT\_POSITION\_CONTAINED\_BY: Short
 val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short
}

```

public external interface SVGBoundingBoxOptions {
    var fill: Boolean? /* = true */
    fun get() = definedExternally
    fun set(value) = definedExternally
    var stroke: Boolean? /* = false */
    fun get() = definedExternally
    fun set(value) = definedExternally
    var markers: Boolean? /* = false */
    fun get() = definedExternally
    fun set(value) = definedExternally
    var clipped: Boolean? /* = false */
    fun get() = definedExternally
    fun set(value) = definedExternally
}

```

@Suppress("INVISIBLE\_REFERENCE"),

```

\ "INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline fun SVGBoundingBoxOptions(fill:
Boolean? = true, stroke: Boolean? = false, markers: Boolean? = false, clipped: Boolean? = false):
SVGBoundingBoxOptions {\n val o = js("{}")\n o["fill"] = fill\n o["stroke"] = stroke\n o["markers"]
= markers\n o["clipped"] = clipped\n return o}\n\n/**\n * Exposes the JavaScript
[SVGGraphicsElement](https://developer.mozilla.org/en/docs/Web/API/SVGGraphicsElement) to Kotlin\n
*\npublic external abstract class SVGGraphicsElement : SVGElement, SVGTests {\n open val transform:
SVGAnimatedTransformList\n fun getBBox(options: SVGBoundingBoxOptions = definedExternally):
DOMRect\n fun getCTM(): DOMMatrix?\n fun getScreenCTM(): DOMMatrix?\n\n companion object {\n
val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE: Short\n val
CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val ENTITY_NODE:
Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE: Short\n val
DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[SVGGeometryElement](https://developer.mozilla.org/en/docs/Web/API/SVGGeometryElement) to Kotlin\n
*\npublic external abstract class SVGGeometryElement : SVGGraphicsElement {\n open val pathLength:
SVGAnimatedNumber\n fun isPointInFill(point: DOMPoint): Boolean\n fun isPointInStroke(point: DOMPoint):
Boolean\n fun getTotalLength(): Float\n fun getPointAtLength(distance: Float): DOMPoint\n\n companion
object {\n val ELEMENT_NODE: Short\n val ATTRIBUTE_NODE: Short\n val TEXT_NODE:
Short\n val CDATA_SECTION_NODE: Short\n val ENTITY_REFERENCE_NODE: Short\n val
ENTITY_NODE: Short\n val PROCESSING_INSTRUCTION_NODE: Short\n val COMMENT_NODE:
Short\n val DOCUMENT_NODE: Short\n val DOCUMENT_TYPE_NODE: Short\n val
DOCUMENT_FRAGMENT_NODE: Short\n val NOTATION_NODE: Short\n val
DOCUMENT_POSITION_DISCONNECTED: Short\n val DOCUMENT_POSITION_PRECEDING: Short\n
val DOCUMENT_POSITION_FOLLOWING: Short\n val DOCUMENT_POSITION_CONTAINS: Short\n
val DOCUMENT_POSITION_CONTAINED_BY: Short\n val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n }\n}\n\n/**\n * Exposes the JavaScript
[SVGNumber](https://developer.mozilla.org/en/docs/Web/API/SVGNumber) to Kotlin\n *\npublic external
abstract class SVGNumber {\n open var value: Float\n}\n\n/**\n * Exposes the JavaScript
[SVGLength](https://developer.mozilla.org/en/docs/Web/API/SVGLength) to Kotlin\n *\npublic external
abstract class SVGLength {\n open val unitType: Short\n open var value: Float\n open var valueInSpecifiedUnits:
Float\n open var valueAsString: String\n fun newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits:
Float)\n fun convertToSpecifiedUnits(unitType: Short)\n\n companion object {\n val
SVG_LENGTHTYPE_UNKNOWN: Short\n val SVG_LENGTHTYPE_NUMBER: Short\n val
SVG_LENGTHTYPE_PERCENTAGE: Short\n val SVG_LENGTHTYPE_EMS: Short\n val
SVG_LENGTHTYPE_EXS: Short\n val SVG_LENGTHTYPE_PX: Short\n val
SVG_LENGTHTYPE_CM: Short\n val SVG_LENGTHTYPE_MM: Short\n val
SVG_LENGTHTYPE_IN: Short\n val SVG_LENGTHTYPE_PT: Short\n val SVG_LENGTHTYPE_PC:
Short\n }\n}\n\n/**\n * Exposes the JavaScript
[SVGAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAngle) to Kotlin\n *\npublic external
abstract class SVGAngle {\n open val unitType: Short\n open var value: Float\n open var valueInSpecifiedUnits:
Float\n open var valueAsString: String\n fun newValueSpecifiedUnits(unitType: Short, valueInSpecifiedUnits:
Float)\n fun convertToSpecifiedUnits(unitType: Short)\n\n companion object {\n val
SVG_ANGLETYPE_UNKNOWN: Short\n val SVG_ANGLETYPE_UNSPECIFIED: Short\n val
SVG_ANGLETYPE_DEG: Short\n val SVG_ANGLETYPE_RAD: Short\n val

```

```

SVG_ANGLETYPE_GRAD: Short\n } \n\n\npublic external abstract class SVGNameList {\n  open val length:
Int\n  open val numberOfItems: Int\n  fun clear()\n  fun initialize(newItem: dynamic): dynamic\n  fun
insertItemBefore(newItem: dynamic, index: Int): dynamic\n  fun replaceItem(newItem: dynamic, index: Int):
dynamic\n  fun removeItem(index: Int): dynamic\n  fun appendItem(newItem: dynamic): dynamic\n  fun
getItem(index: Int): dynamic\n} \n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNameList.get(index: Int):
dynamic = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNameList.set(index: Int,
newItem: dynamic) { asDynamic()[index] = newItem } \n\n/**\n * Exposes the JavaScript
[SVGNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGNumberList) to Kotlin\n */\npublic external
abstract class SVGNumberList {\n  open val length: Int\n  open val numberOfItems: Int\n  fun clear()\n  fun
initialize(newItem: SVGNumber): SVGNumber\n  fun insertItemBefore(newItem: SVGNumber, index: Int):
SVGNumber\n  fun replaceItem(newItem: SVGNumber, index: Int): SVGNumber\n  fun removeItem(index: Int):
SVGNumber\n  fun appendItem(newItem: SVGNumber): SVGNumber\n  fun getItem(index: Int):
SVGNumber\n} \n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNumberList.get(index:
Int): SVGNumber? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGNumberList.set(index:
Int, newItem: SVGNumber) { asDynamic()[index] = newItem } \n\n/**\n * Exposes the JavaScript
[SVGLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGLengthList) to Kotlin\n */\npublic external
abstract class SVGLengthList {\n  open val length: Int\n  open val numberOfItems: Int\n  fun clear()\n  fun
initialize(newItem: SVGLength): SVGLength\n  fun insertItemBefore(newItem: SVGLength, index: Int):
SVGLength\n  fun replaceItem(newItem: SVGLength, index: Int): SVGLength\n  fun removeItem(index: Int):
SVGLength\n  fun appendItem(newItem: SVGLength): SVGLength\n  fun getItem(index: Int):
SVGLength\n} \n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGLengthList.get(index:
Int): SVGLength? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGLengthList.set(index: Int,
newItem: SVGLength) { asDynamic()[index] = newItem } \n\n/**\n * Exposes the JavaScript
[SVGAnimatedBoolean](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedBoolean) to Kotlin\n */\npublic external abstract class SVGAnimatedBoolean {\n  open var baseVal: Boolean\n  open val animVal:
Boolean\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedEnumeration](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedEnumeration) to
Kotlin\n */\npublic external abstract class SVGAnimatedEnumeration {\n  open var baseVal: Short\n  open val
animVal: Short\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedInteger](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedInteger) to Kotlin\n */\npublic external abstract class SVGAnimatedInteger {\n  open var baseVal: Int\n  open val animVal:
Int\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedNumber](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumber) to Kotlin\n */\npublic external abstract class SVGAnimatedNumber {\n  open var baseVal: Float\n  open val animVal:
Float\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedLength](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLength) to Kotlin\n */\npublic external abstract class SVGAnimatedLength {\n  open val baseVal: SVGLength\n  open val animVal:
SVGLength\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedAngle](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedAngle) to Kotlin\n */\npublic
external abstract class SVGAnimatedAngle {\n  open val baseVal: SVGAngle\n  open val animVal:
SVGAngle\n} \n\n/**\n * Exposes the JavaScript
[SVGAnimatedString](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedString) to Kotlin\n */\npublic

```

```

external abstract class SVGAnimatedString {\n  open var baseVal: String\n  open val animVal: String\n}\n\n/**\n * Exposes the JavaScript [SVGAnimatedRect](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedRect)
to Kotlin\n */\n\npublic external abstract class SVGAnimatedRect {\n  open val baseVal: DOMRect\n  open val
animVal: DOMRectReadOnly\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedNumberList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedNumberList) to Kotlin\n
*/\n\npublic external abstract class SVGAnimatedNumberList {\n  open val baseVal: SVGNumberList\n  open val
animVal: SVGNumberList\n}\n\n/**\n * Exposes the JavaScript
[SVGAnimatedLengthList](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedLengthList) to Kotlin\n
*/\n\npublic external abstract class SVGAnimatedLengthList {\n  open val baseVal: SVGLengthList\n  open val
animVal: SVGLengthList\n}\n\n/**\n * Exposes the JavaScript
[SVGStringList](https://developer.mozilla.org/en/docs/Web/API/SVGStringList) to Kotlin\n */\n\npublic external
abstract class SVGStringList {\n  open val length: Int\n  open val numberOfItems: Int\n  fun clear()\n  fun
initialize(newItem: String): String\n  fun insertItemBefore(newItem: String, index: Int): String\n  fun
replaceItem(newItem: String, index: Int): String\n  fun removeItem(index: Int): String\n  fun
appendItem(newItem: String): String\n  fun getItem(index: Int):
String\n}\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun SVGStringList.get(index:
Int): String? = asDynamic()[index]\n\n@Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER")\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun SVGStringList.set(index: Int,
newItem: String) { asDynamic()[index] = newItem }\n\n/**\n * Exposes the JavaScript
[SVGUnitTypes](https://developer.mozilla.org/en/docs/Web/API/SVGUnitTypes) to Kotlin\n
*/\n\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external interface SVGUnitTypes
{\n  companion object {\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val
SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGTTests](https://developer.mozilla.org/en/docs/Web/API/SVGTTests) to Kotlin\n */\n\npublic external interface
SVGTTests {\n  val requiredExtensions: SVGStringList\n  val systemLanguage: SVGStringList\n}\n\npublic
external interface SVGFitToViewBox {\n  val viewBox: SVGAnimatedRect\n  val preserveAspectRatio:
SVGAnimatedPreserveAspectRatio\n}\n\n/**\n * Exposes the JavaScript
[SVGZoomAndPan](https://developer.mozilla.org/en/docs/Web/API/SVGZoomAndPan) to Kotlin\n
*/\n\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\n\npublic external interface
SVGZoomAndPan {\n  var zoomAndPan: Short\n\n  companion object {\n    val
SVG_ZOOMANDPAN_UNKNOWN: Short\n    val SVG_ZOOMANDPAN_DISABLE: Short\n    val
SVG_ZOOMANDPAN_MAGNIFY: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGURIReference](https://developer.mozilla.org/en/docs/Web/API/SVGURIReference) to Kotlin\n */\n\npublic
external interface SVGURIReference {\n  val href: SVGAnimatedString\n}\n\n/**\n * Exposes the JavaScript
[SVGSVGElement](https://developer.mozilla.org/en/docs/Web/API/SVGSVGElement) to Kotlin\n */\n\npublic
external abstract class SVGSVGElement : SVGGraphicsElement, SVGFitToViewBox, SVGZoomAndPan,
WindowEventHandlers {\n  open val x: SVGAnimatedLength\n  open val y: SVGAnimatedLength\n  open val
width: SVGAnimatedLength\n  open val height: SVGAnimatedLength\n  open var currentScale: Float\n  open
val currentTranslate: DOMPointReadOnly\n  fun getIntersectionList(rect: DOMRectReadOnly, referenceElement:
SVGElement?): NodeList\n  fun getEnclosureList(rect: DOMRectReadOnly, referenceElement: SVGElement?):
NodeList\n  fun checkIntersection(element: SVGElement, rect: DOMRectReadOnly): Boolean\n  fun
checkEnclosure(element: SVGElement, rect: DOMRectReadOnly): Boolean\n  fun deselectAll()\n  fun
createSVGNumber(): SVGNumber\n  fun createSVGLength(): SVGLength\n  fun createSVGAngle():
SVGAngle\n  fun createSVGPoint(): DOMPoint\n  fun createSVGMatrix(): DOMMatrix\n  fun
createSVGRect(): DOMRect\n  fun createSVGTransform(): SVGTransform\n  fun
createSVGTransformFromMatrix(matrix: DOMMatrixReadOnly): SVGTransform\n  fun

```



```

Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGMetadataElement](https://developer.mozilla.org/en/docs/Web/API/SVGMetadataElement) to Kotlin\n
*/\npublic external abstract class SVGMetadataElement : SVGElement {\n    companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGTitleElement](https://developer.mozilla.org/en/docs/Web/API/SVGTitleElement) to Kotlin\n
*/\npublic
external abstract class SVGTitleElement : SVGElement {\n    companion object {\n    val ELEMENT_NODE:
Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE:
Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGSymbolElement](https://developer.mozilla.org/en/docs/Web/API/SVGSymbolElement) to Kotlin\n
*/\npublic
external abstract class SVGSymbolElement : SVGGraphicsElement, SVGFitToViewBox {\n    companion object
{\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGUseElement](https://developer.mozilla.org/en/docs/Web/API/SVGUseElement) to Kotlin\n
*/\npublic external
abstract class SVGUseElement : SVGGraphicsElement, SVGURIReference {\n    open val x:
SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open val width: SVGAnimatedLength\n
    open val height: SVGAnimatedLength\n    open val instanceRoot: SVGElement?\n    open val animatedInstanceRoot:
SVGElement?\n\n    companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE:
Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val

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PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external open class
SVGUseElementShadowRoot : ShadowRoot {\n    companion object {\n        val ELEMENT_NODE: Short\n
    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n
    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface
SVGElementInstance {\n    val correspondingElement: SVGElement?\n    get() = definedExternally\n    val
correspondingUseElement: SVGUseElement?\n    get() = definedExternally\n}\n}\n\npublic external open class
ShadowAnimation(source: dynamic, newTarget: dynamic) {\n    open val sourceAnimation: dynamic\n}\n}\n\n**\n *
Exposes the JavaScript [SVGSwitchElement](https://developer.mozilla.org/en/docs/Web/API/SVGSwitchElement)
to Kotlin\n *^\n\npublic external abstract class SVGSwitchElement : SVGGraphicsElement {\n    companion object
{\n        val ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n
        val CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val
ENTITY_NODE: Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE:
Short\n        val DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external interface
GetSVGDocument {\n    fun getSVGDocument(): Document\n}\n}\n\n**\n * Exposes the JavaScript
[SVGStyleElement](https://developer.mozilla.org/en/docs/Web/API/SVGStyleElement) to Kotlin\n *^\n\npublic
external abstract class SVGStyleElement : SVGElement, LinkStyle {\n    open var type: String\n    open var media:
String\n    open var title: String\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n}\n\n**\n * Exposes the JavaScript
[SVGTransform](https://developer.mozilla.org/en/docs/Web/API/SVGTransform) to Kotlin\n *^\n\npublic external
abstract class SVGTransform {\n    open val type: Short\n    open val matrix: DOMMatrix\n    open val angle:
Float\n    fun setMatrix(matrix: DOMMatrixReadOnly)\n    fun setTranslate(tx: Float, ty: Float)\n    fun setScale(sx:
Float, sy: Float)\n    fun setRotate(angle: Float, cx: Float, cy: Float)\n    fun setSkewX(angle: Float)\n    fun

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external abstract class SVGRectElement : SVGGeometryElement {
    open val x: SVGAnimatedLength
    open val y: SVGAnimatedLength
    open val width: SVGAnimatedLength
    open val height: SVGAnimatedLength
    open val rx: SVGAnimatedLength
    open val ry: SVGAnimatedLength
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short * Exposes the JavaScript
[SVGCircleElement](https://developer.mozilla.org/en/docs/Web/API/SVGCircleElement) to Kotlin
public
external abstract class SVGCircleElement : SVGGeometryElement {
    open val cx: SVGAnimatedLength
    open val cy: SVGAnimatedLength
    open val r: SVGAnimatedLength
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short * Exposes the JavaScript
[SVGEllipseElement](https://developer.mozilla.org/en/docs/Web/API/SVGEllipseElement) to Kotlin
public
external abstract class SVGEllipseElement : SVGGeometryElement {
    open val cx: SVGAnimatedLength
    open val cy: SVGAnimatedLength
    open val rx: SVGAnimatedLength
    open val ry: SVGAnimatedLength
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short * Exposes the JavaScript
[SVGLineElement](https://developer.mozilla.org/en/docs/Web/API/SVGLineElement) to Kotlin
public
external abstract class SVGLineElement : SVGGeometryElement {
    open val x1: SVGAnimatedLength
    open val y1: SVGAnimatedLength
    open val x2: SVGAnimatedLength
    open val y2: SVGAnimatedLength
    companion object {
        val ELEMENT_NODE: Short
        val ATTRIBUTE_NODE: Short
        val TEXT_NODE: Short
        val CDATA_SECTION_NODE: Short
        val ENTITY_REFERENCE_NODE: Short
        val ENTITY_NODE: Short
        val PROCESSING_INSTRUCTION_NODE: Short
        val COMMENT_NODE: Short
        val DOCUMENT_NODE: Short
        val DOCUMENT_TYPE_NODE: Short
        val DOCUMENT_FRAGMENT_NODE: Short
        val NOTATION_NODE: Short
        val DOCUMENT_POSITION_DISCONNECTED: Short
        val DOCUMENT_POSITION_PRECEDING: Short
        val DOCUMENT_POSITION_FOLLOWING: Short
        val DOCUMENT_POSITION_CONTAINS: Short
        val DOCUMENT_POSITION_CONTAINED_BY: Short
    }
}
}

DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short * Exposes the JavaScript

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[SVGMeshElement](https://developer.mozilla.org/en/docs/Web/API/SVGMeshElement) to Kotlin\n \*/\npublic external abstract class SVGMeshElement : SVGGeometryElement, SVGURIReference {\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }}\n\n/\*\*\n \* Exposes the JavaScript [SVGAnimatedPoints](https://developer.mozilla.org/en/docs/Web/API/SVGAnimatedPoints) to Kotlin\n \*/\npublic external interface SVGAnimatedPoints {\n val points: SVGPointList\n val animatedPoints: SVGPointList\n}\n\npublic external abstract class SVGPointList {\n open val length: Int\n open val numberOfItems: Int\n fun clear()\n fun initialize(newItem: DOMPoint): DOMPoint\n fun insertItemBefore(newItem: DOMPoint, index: Int): DOMPoint\n fun replaceItem(newItem: DOMPoint, index: Int): DOMPoint\n fun removeItem(index: Int): DOMPoint\n fun appendItem(newItem: DOMPoint): DOMPoint\n fun getItem(index: Int): DOMPoint\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGPointList.get(index: Int): DOMPoint? = asDynamic()[index]\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline operator fun SVGPointList.set(index: Int, newItem: DOMPoint) { asDynamic()[index] = newItem }\n\n/\*\*\n \* Exposes the JavaScript [SVGPolylineElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolylineElement) to Kotlin\n \*/\npublic external abstract class SVGPolylineElement : SVGGeometryElement, SVGAnimatedPoints {\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }}\n\n/\*\*\n \* Exposes the JavaScript [SVGPolygonElement](https://developer.mozilla.org/en/docs/Web/API/SVGPolygonElement) to Kotlin\n \*/\npublic external abstract class SVGPolygonElement : SVGGeometryElement, SVGAnimatedPoints {\n companion object {\n val ELEMENT\_NODE: Short\n val ATTRIBUTE\_NODE: Short\n val TEXT\_NODE: Short\n val CDATA\_SECTION\_NODE: Short\n val ENTITY\_REFERENCE\_NODE: Short\n val ENTITY\_NODE: Short\n val PROCESSING\_INSTRUCTION\_NODE: Short\n val COMMENT\_NODE: Short\n val DOCUMENT\_NODE: Short\n val DOCUMENT\_TYPE\_NODE: Short\n val DOCUMENT\_FRAGMENT\_NODE: Short\n val NOTATION\_NODE: Short\n val DOCUMENT\_POSITION\_DISCONNECTED: Short\n val DOCUMENT\_POSITION\_PRECEDING: Short\n val DOCUMENT\_POSITION\_FOLLOWING: Short\n val DOCUMENT\_POSITION\_CONTAINS: Short\n val DOCUMENT\_POSITION\_CONTAINED\_BY: Short\n val DOCUMENT\_POSITION\_IMPLEMENTATION\_SPECIFIC: Short\n }}\n\n/\*\*\n \* Exposes the JavaScript [SVGTextContentElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextContentElement) to Kotlin\n \*/\npublic external abstract class SVGTextContentElement : SVGGraphicsElement {\n open val textLength: SVGAnimatedLength\n open val lengthAdjust: SVGAnimatedEnumeration\n fun getNumberOfChars(): Int\n fun getComputedTextLength(): Float\n fun getSubStringLength(charnum: Int, nchars: Int): Float\n fun



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PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGTextPathElement](https://developer.mozilla.org/en/docs/Web/API/SVGTextPathElement) to Kotlin\n
*/\npublic external abstract class SVGTextPathElement : SVGTextContentElement, SVGURIReference {\n    open
val startOffset: SVGAnimatedLength\n    open val method: SVGAnimatedEnumeration\n    open val spacing:
SVGAnimatedEnumeration\n\n    companion object {\n        val TEXTPATH_METHODTYPE_UNKNOWN:
Short\n        val TEXTPATH_METHODTYPE_ALIGN: Short\n        val
TEXTPATH_METHODTYPE_STRETCH: Short\n        val TEXTPATH_SPACINGTYPE_UNKNOWN: Short\n
        val TEXTPATH_SPACINGTYPE_AUTO: Short\n        val TEXTPATH_SPACINGTYPE_EXACT: Short\n
        val LENGTHADJUST_UNKNOWN: Short\n        val LENGTHADJUST_SPACING: Short\n        val
LENGTHADJUST_SPACINGANDGLYPHS: Short\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGImageElement](https://developer.mozilla.org/en/docs/Web/API/SVGImageElement) to Kotlin\n
*/\npublic external abstract class SVGImageElement : SVGGraphicsElement, SVGURIReference,
HTMLOrSVGImageElement {\n    open val x: SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open
val width: SVGAnimatedLength\n    open val height: SVGAnimatedLength\n    open val preserveAspectRatio:
SVGAnimatedPreserveAspectRatio\n    open var crossOrigin: String?\n\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }n}\n\n/**\n * Exposes the JavaScript
[SVGForeignObjectElement](https://developer.mozilla.org/en/docs/Web/API/SVGForeignObjectElement) to
Kotlin\n
*/\npublic external abstract class SVGForeignObjectElement : SVGGraphicsElement {\n    open val x:
SVGAnimatedLength\n    open val y: SVGAnimatedLength\n    open val width: SVGAnimatedLength\n    open val
height: SVGAnimatedLength\n\n    companion object {\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val

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DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external abstract class
SVGMarkerElement : SVGElement, SVGFitToViewBox {\n    open val refX: SVGAnimatedLength\n    open val
refY: SVGAnimatedLength\n    open val markerUnits: SVGAnimatedEnumeration\n    open val markerWidth:
SVGAnimatedLength\n    open val markerHeight: SVGAnimatedLength\n    open val orientType:
SVGAnimatedEnumeration\n    open val orientAngle: SVGAnimatedAngle\n    open var orient: String\n    fun
setOrientToAuto()\n    fun setOrientToAngle(angle: SVGAngle)\n\n    companion object {\n        val
SVG_MARKERUNITS_UNKNOWN: Short\n        val SVG_MARKERUNITS_USERSPACEONUSE: Short\n
        val SVG_MARKERUNITS_STROKEWIDTH: Short\n        val SVG_MARKER_ORIENT_UNKNOWN: Short\n
        val SVG_MARKER_ORIENT_AUTO: Short\n        val SVG_MARKER_ORIENT_ANGLE: Short\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGSolidcolorElement](https://developer.mozilla.org/en/docs/Web/API/SVGSolidcolorElement) to Kotlin\n
*\n\npublic external abstract class SVGSolidcolorElement : SVGElement {\n    companion object {\n        val
ELEMENT_NODE: Short\n        val ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val
CDATA_SECTION_NODE: Short\n        val ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE:
Short\n        val PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGGradientElement) to Kotlin\n
*\n\npublic external abstract class SVGGradientElement : SVGElement, SVGURIReference, SVGUnitTypes {\n
    open val gradientUnits: SVGAnimatedEnumeration\n    open val gradientTransform: SVGAnimatedTransformList\n
    open val spreadMethod: SVGAnimatedEnumeration\n\n    companion object {\n        val
SVG_SPREADMETHOD_UNKNOWN: Short\n        val SVG_SPREADMETHOD_PAD: Short\n        val
SVG_SPREADMETHOD_REFLECT: Short\n        val SVG_SPREADMETHOD_REPEAT: Short\n        val
SVG_UNIT_TYPE_UNKNOWN: Short\n        val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n        val
SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val

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DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGLinearGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGLinearGradientElement) to
Kotlin\n *\npublic external abstract class SVGLinearGradientElement : SVGGradientElement {\n  open val x1:
SVGAnimatedLength\n  open val y1: SVGAnimatedLength\n  open val x2: SVGAnimatedLength\n  open val
y2: SVGAnimatedLength\n\n  companion object {\n    val SVG_SPREADMETHOD_UNKNOWN: Short\n    val
SVG_SPREADMETHOD_PAD: Short\n    val SVG_SPREADMETHOD_REFLECT: Short\n    val
SVG_SPREADMETHOD_REPEAT: Short\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val
SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n
    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val
ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[SVGRadialGradientElement](https://developer.mozilla.org/en/docs/Web/API/SVGRadialGradientElement) to
Kotlin\n *\npublic external abstract class SVGRadialGradientElement : SVGGradientElement {\n  open val cx:
SVGAnimatedLength\n  open val cy: SVGAnimatedLength\n  open val r: SVGAnimatedLength\n  open val fx:
SVGAnimatedLength\n  open val fy: SVGAnimatedLength\n  open val fr: SVGAnimatedLength\n\n  companion
object {\n    val SVG_SPREADMETHOD_UNKNOWN: Short\n    val SVG_SPREADMETHOD_PAD:
Short\n    val SVG_SPREADMETHOD_REFLECT: Short\n    val SVG_SPREADMETHOD_REPEAT:
Short\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val SVG_UNIT_TYPE_USERSPACEONUSE:
Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n    val ELEMENT_NODE: Short\n
    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n
    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external abstract class
SVGMeshGradientElement : SVGGradientElement {\n  companion object {\n    val
SVG_SPREADMETHOD_UNKNOWN: Short\n    val SVG_SPREADMETHOD_PAD: Short\n    val
SVG_SPREADMETHOD_REFLECT: Short\n    val SVG_SPREADMETHOD_REPEAT: Short\n    val
SVG_UNIT_TYPE_UNKNOWN: Short\n    val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val
SVG_UNIT_TYPE_OBJECTBOUNDINGBOX: Short\n    val ELEMENT_NODE: Short\n    val
ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }\n}\n\npublic external abstract class

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SVGMeshrowElement : SVGElement {\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }}\n\npublic external abstract class
SVGMeshpatchElement : SVGElement {\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }}\n\n/**\n * Exposes the JavaScript
[SVGStopElement](https://developer.mozilla.org/en/docs/Web/API/SVGStopElement) to Kotlin\n */\n\npublic
external abstract class SVGStopElement : SVGElement {\n  open val offset: SVGAnimatedNumber\n\n  companion object {\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE:
Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }}\n\n/**\n * Exposes the JavaScript
[SVGPatternElement](https://developer.mozilla.org/en/docs/Web/API/SVGPatternElement) to Kotlin\n */\n\npublic
external abstract class SVGPatternElement : SVGElement, SVGFitToViewBox, SVGURIReference,
SVGUnitTypes {\n  open val patternUnits: SVGAnimatedEnumeration\n  open val patternContentUnits:
SVGAnimatedEnumeration\n  open val patternTransform: SVGAnimatedTransformList\n  open val x:
SVGAnimatedLength\n  open val y: SVGAnimatedLength\n  open val width: SVGAnimatedLength\n  open val
height: SVGAnimatedLength\n\n  companion object {\n    val SVG_UNIT_TYPE_UNKNOWN: Short\n    val SVG_UNIT_TYPE_USERSPACEONUSE: Short\n    val SVG_UNIT_TYPE_OBJECTBOUNDINGBOX:
Short\n    val ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE:
Short\n    val DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n  }}\n\npublic external abstract class
SVGHatchElement : SVGElement {\n  companion object {\n    val ELEMENT_NODE: Short\n    val

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ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\npublic external abstract class
SVGHatchpathElement : SVGElement {\n    companion object {\n    val ELEMENT_NODE: Short\n    val
ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGCursorElement](https://developer.mozilla.org/en/docs/Web/API/SVGCursorElement) to Kotlin\n */\npublic
external abstract class SVGCursorElement : SVGElement, SVGURIReference {\n    open val x:
SVGAnimatedLength\n    open val y: SVGAnimatedLength\n\n    companion object {\n    val
ELEMENT_NODE: Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val
CDATA_SECTION_NODE: Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE:
Short\n    val PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGScriptElement](https://developer.mozilla.org/en/docs/Web/API/SVGScriptElement) to Kotlin\n */\npublic
external abstract class SVGScriptElement : SVGElement, SVGURIReference, HTMLOrSVGScriptElement {\n
    open var type: String\n    open var crossOrigin: String?\n\n    companion object {\n    val ELEMENT_NODE:
Short\n    val ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE:
Short\n    val ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    }\n}\n\n/**\n * Exposes the JavaScript
[SVGAEElement](https://developer.mozilla.org/en/docs/Web/API/SVGAEElement) to Kotlin\n */\npublic external
abstract class SVGAEElement : SVGGraphicsElement, SVGURIReference {\n    open val target:
SVGAnimatedString\n    open val download: SVGAnimatedString\n    open val rel: SVGAnimatedString\n    open
val relList: SVGAnimatedString\n    open val hreflang: SVGAnimatedString\n    open val type:
SVGAnimatedString\n\n    companion object {\n    val ELEMENT_NODE: Short\n    val

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ATTRIBUTE_NODE: Short\n    val TEXT_NODE: Short\n    val CDATA_SECTION_NODE: Short\n    val
ENTITY_REFERENCE_NODE: Short\n    val ENTITY_NODE: Short\n    val
PROCESSING_INSTRUCTION_NODE: Short\n    val COMMENT_NODE: Short\n    val
DOCUMENT_NODE: Short\n    val DOCUMENT_TYPE_NODE: Short\n    val
DOCUMENT_FRAGMENT_NODE: Short\n    val NOTATION_NODE: Short\n    val
DOCUMENT_POSITION_DISCONNECTED: Short\n    val DOCUMENT_POSITION_PRECEDING: Short\n
    val DOCUMENT_POSITION_FOLLOWING: Short\n    val DOCUMENT_POSITION_CONTAINS: Short\n
    val DOCUMENT_POSITION_CONTAINED_BY: Short\n    val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Exposes the JavaScript
[SVGViewElement](https://developer.mozilla.org/en/docs/Web/API/SVGViewElement) to Kotlin \n * \n public
external abstract class SVGViewElement : SVGElement, SVGFitToViewBox, SVGZoomAndPan { \n    companion
object { \n        val SVG_ZOOMANDPAN_UNKNOWN: Short\n        val SVG_ZOOMANDPAN_DISABLE:
Short\n        val SVG_ZOOMANDPAN_MAGNIFY: Short\n        val ELEMENT_NODE: Short\n        val
ATTRIBUTE_NODE: Short\n        val TEXT_NODE: Short\n        val CDATA_SECTION_NODE: Short\n        val
ENTITY_REFERENCE_NODE: Short\n        val ENTITY_NODE: Short\n        val
PROCESSING_INSTRUCTION_NODE: Short\n        val COMMENT_NODE: Short\n        val
DOCUMENT_NODE: Short\n        val DOCUMENT_TYPE_NODE: Short\n        val
DOCUMENT_FRAGMENT_NODE: Short\n        val NOTATION_NODE: Short\n        val
DOCUMENT_POSITION_DISCONNECTED: Short\n        val DOCUMENT_POSITION_PRECEDING: Short\n
        val DOCUMENT_POSITION_FOLLOWING: Short\n        val DOCUMENT_POSITION_CONTAINS: Short\n
        val DOCUMENT_POSITION_CONTAINED_BY: Short\n        val
DOCUMENT_POSITION_IMPLEMENTATION_SPECIFIC: Short\n    } \n} \n \n /** \n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors. \n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file. \n * \n \n // NOTE: THIS FILE IS AUTO-
GENERATED, DO NOT EDIT! \n // See github.com/kotlin/dukat for details \n \n package org.w3c.files \n \n import
kotlin.js.* \n import org.khronos.webgl.* \n import org.w3c.dom.* \n import org.w3c.dom.events.* \n import
org.w3c.xhr.* \n \n /** \n * Exposes the JavaScript [Blob](https://developer.mozilla.org/en/docs/Web/API/Blob) to
Kotlin \n * \n public external open class Blob(blobParts: Array<dynamic> = definedExternally, options:
BlobPropertyBag = definedExternally) : MediaProvider, ImageBitmapSource { \n    open val size: Number \n    open
val type: String \n    open val isClosed: Boolean \n    fun slice(start: Int = definedExternally, end: Int =
definedExternally, contentType: String = definedExternally): Blob \n    fun close() \n} \n \n public external interface
BlobPropertyBag { \n    var type: String? /* = "" */ \n    fun get() = definedExternally \n    fun set(value) =
definedExternally \n} \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun BlobPropertyBag(type: String? = ""):
BlobPropertyBag { \n    val o = js("{}") \n    o["type"] = type \n    return o \n} \n \n /** \n * Exposes the JavaScript
[File](https://developer.mozilla.org/en/docs/Web/API/File) to Kotlin \n * \n public external open class File(fileBits:
Array<dynamic>, fileName: String, options: FilePropertyBag = definedExternally) : Blob { \n    open val name:
String \n    open val lastModified: Int \n} \n \n public external interface FilePropertyBag : BlobPropertyBag { \n    var
lastModified: Int? \n    fun get() = definedExternally \n    fun set(value) =
definedExternally \n} \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline fun FilePropertyBag(lastModified: Int? =
undefined, type: String? = ""): FilePropertyBag { \n    val o = js("{}") \n    o["lastModified"] = lastModified \n
o["type"] = type \n    return o \n} \n \n /** \n * Exposes the JavaScript
[FileList](https://developer.mozilla.org/en/docs/Web/API/FileList) to Kotlin \n * \n public external abstract class
FileList : ItemArrayLike<File> { \n    override fun item(index: Int):
File? \n} \n \n @Suppress("INVISIBLE_REFERENCE",
"INVISIBLE_MEMBER") \n @kotlin.internal.InlineOnly \n public inline operator fun FileList.get(index: Int): File?
= asDynamic()[index] \n \n /** \n * Exposes the JavaScript

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[FileReader](https://developer.mozilla.org/en/docs/Web/API/FileReader) to Kotlin\n \*^\\npublic external open class FileReader : EventTarget {\n open val readyState: Short\n open val result: dynamic\n open val error: dynamic\n var onloadstart: ((ProgressEvent) -> dynamic)?\n var onprogress: ((ProgressEvent) -> dynamic)?\n var onload: ((Event) -> dynamic)?\n var onabort: ((Event) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n var onloadend: ((Event) -> dynamic)?\n fun readAsArrayBuffer(blob: Blob)\n fun readAsBinaryString(blob: Blob)\n fun readAsText(blob: Blob, label: String = definedExternally)\n fun readAsDataURL(blob: Blob)\n fun abort()\n\n companion object {\n val EMPTY: Short\n val LOADING: Short\n val DONE: Short\n }\n}\n\n/\*\*\n \* Exposes the JavaScript

[FileReaderSync](https://developer.mozilla.org/en/docs/Web/API/FileReaderSync) to Kotlin\n \*^\\npublic external open class FileReaderSync {\n fun readAsArrayBuffer(blob: Blob): ArrayBuffer\n fun readAsBinaryString(blob: Blob): String\n fun readAsText(blob: Blob, label: String = definedExternally): String\n fun readAsDataURL(blob: Blob): String\n}\n\n/\*\*\n \* Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n \*^\\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.notifications\n\nimport kotlin.js.\*\nimport org.khronos.webgl.\*\nimport org.w3c.dom.events.\*\nimport org.w3c.workers.\*\n\n/\*\*\n \* Exposes the JavaScript

[Notification](https://developer.mozilla.org/en/docs/Web/API/Notification) to Kotlin\n \*^\\npublic external open class Notification(title: String, options: NotificationOptions = definedExternally) : EventTarget {\n var onclick: ((MouseEvent) -> dynamic)?\n var onerror: ((Event) -> dynamic)?\n open val title: String\n open val dir: NotificationDirection\n open val lang: String\n open val body: String\n open val tag: String\n open val image: String\n open val icon: String\n open val badge: String\n open val sound: String\n open val vibrate: Array<out Int>\n open val timestamp: Number\n open val renotify: Boolean\n open val silent: Boolean\n open val noscreen: Boolean\n open val requireInteraction: Boolean\n open val sticky: Boolean\n open val data: Any?\n open val actions: Array<out NotificationAction>\n fun close()\n\n companion object {\n val permission: NotificationPermission\n val maxActions: Int\n fun requestPermission(deprecatedCallback: (NotificationPermission) -> Unit = definedExternally): Promise<NotificationPermission>\n }\n}\n\npublic external interface NotificationOptions {\n var dir: NotificationDirection? /\* = NotificationDirection.AUTO \*/\n get() = definedExternally\n set(value) = definedExternally\n var lang: String? /\* = "" \*/\n get() = definedExternally\n set(value) = definedExternally\n var body: String? /\* = "" \*/\n get() = definedExternally\n set(value) = definedExternally\n var tag: String? /\* = "" \*/\n get() = definedExternally\n set(value) = definedExternally\n var image: String?\n get() = definedExternally\n set(value) = definedExternally\n var icon: String?\n get() = definedExternally\n set(value) = definedExternally\n var badge: String?\n get() = definedExternally\n set(value) = definedExternally\n var sound: String?\n get() = definedExternally\n set(value) = definedExternally\n var vibrate: dynamic\n get() = definedExternally\n set(value) = definedExternally\n var timestamp: Number?\n get() = definedExternally\n set(value) = definedExternally\n var renotify: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var silent: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var noscreen: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var requireInteraction: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var sticky: Boolean? /\* = false \*/\n get() = definedExternally\n set(value) = definedExternally\n var data: Any? /\* = null \*/\n get() = definedExternally\n set(value) = definedExternally\n var actions: Array<NotificationAction>? /\* = arrayOf() \*/\n get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE\_REFERENCE\", \"INVISIBLE\_MEMBER\")\n\npublic inline fun NotificationOptions(dir: NotificationDirection? = NotificationDirection.AUTO, lang: String? = \"\", body: String? = \"\", tag: String? = \"\", image: String? = undefined, icon: String? = undefined, badge: String? = undefined, sound: String? = undefined, vibrate: dynamic = undefined, timestamp: Number? = undefined, renotify: Boolean? = false, silent: Boolean? =

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false, noscreen: Boolean? = false, requireInteraction: Boolean? = false, sticky: Boolean? = false, data: Any? = null,
actions: Array<NotificationAction>? = arrayOf(): NotificationOptions {
    val o = js("{}")
    o["dir"] = dir
    o["lang"] = lang
    o["body"] = body
    o["tag"] = tag
    o["image"] = image
    o["icon"] = icon
    o["badge"] = badge
    o["sound"] = sound
    o["vibrate"] = vibrate
    o["timestamp"] = timestamp
    o["renotify"] = renotify
    o["silent"] = silent
    o["noscreen"] = noscreen
    o["requireInteraction"] = requireInteraction
    o["sticky"] = sticky
    o["data"] = data
    o["actions"] = actions
    return o
}

public external interface NotificationAction {
    var action: String?
    var title: String?
    var icon: String?
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun NotificationAction(action: String?, title: String?, icon: String? = undefined): NotificationAction {
    val o = js("{}")
    o["action"] = action
    o["title"] = title
    o["icon"] = icon
    return o
}

public external interface GetNotificationOptions {
    var tag: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun GetNotificationOptions(tag: String? = ""): GetNotificationOptions {
    val o = js("{}")
    o["tag"] = tag
    return o
}

/** Exposes the JavaScript [NotificationEvent](https://developer.mozilla.org/en/docs/Web/API/NotificationEvent) to Kotlin */
public external open class NotificationEvent(type: String, eventInitDict: NotificationEventInit) :
    ExtendableEvent {
    open val notification: Notification
    open val action: String
    companion object {
        val NONE: Short
        val CAPTURING_PHASE: Short
        val AT_TARGET: Short
        val BUBBLING_PHASE: Short
    }
}

public external interface NotificationEventInit : ExtendableEventInit {
    var notification: Notification?
    var action: String? /* = "" */
    get() = definedExternally
    set(value) = definedExternally
}

@Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")
@kotlin.internal.InlineOnly
public inline fun NotificationEventInit(notification: Notification?, action: String? = "", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): NotificationEventInit {
    val o = js("{}")
    o["notification"] = notification
    o["action"] = action
    o["bubbles"] = bubbles
    o["cancelable"] = cancelable
    o["composed"] = composed
    return o
}

/* please, don't implement this interface! */
@JsName("")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external interface NotificationPermission {
    companion object {
        NotificationPermission.Companion.DEFAULT: NotificationPermission
        get() = "default".asDynamic().unsafeCast<NotificationPermission>()
        NotificationPermission.Companion.DENIED: NotificationPermission
        get() = "denied".asDynamic().unsafeCast<NotificationPermission>()
        NotificationPermission.Companion.GRANTED: NotificationPermission
        get() = "granted".asDynamic().unsafeCast<NotificationPermission>()
    }
}

/* please, don't implement this interface! */
@JsName("")
@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")
public external interface NotificationDirection {
    companion object {
        NotificationDirection.Companion.AUTO: NotificationDirection
        get() = "auto".asDynamic().unsafeCast<NotificationDirection>()
        NotificationDirection.Companion.LTR: NotificationDirection
        get() = "ltr".asDynamic().unsafeCast<NotificationDirection>()
        NotificationDirection.Companion.RTL: NotificationDirection
        get() = "rtl".asDynamic().unsafeCast<NotificationDirection>()
    }
}

/* Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.
 */
package org.w3c.workers
import kotlin.js.*
import org.khronos.webgl.*
import org.w3c.dom.*
import org.w3c.dom.events.*
import org.w3c.fetch.*
import

```

```

org.w3c.notifications.*\n\n**\n * Exposes the JavaScript
[ServiceWorker](https://developer.mozilla.org/en/docs/Web/API/ServiceWorker) to Kotlin\n *\npublic external
abstract class ServiceWorker : EventTarget, AbstractWorker, UnionMessagePortOrServiceWorker,
UnionClientOrMessagePortOrServiceWorker {\n  open val scriptURL: String\n  open val state:
ServiceWorkerState\n  open var onstatechange: ((Event) -> dynamic)?\n  fun postMessage(message: Any?,
transfer: Array<dynamic> = definedExternally)\n}\n\n**\n * Exposes the JavaScript
[ServiceWorkerRegistration](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerRegistration) to
Kotlin\n *\npublic external abstract class ServiceWorkerRegistration : EventTarget {\n  open val installing:
ServiceWorker?\n  open val waiting: ServiceWorker?\n  open val active: ServiceWorker?\n  open val scope:
String\n  open var onupdatefound: ((Event) -> dynamic)?\n  open val APISpace: dynamic\n  fun update():
Promise<Unit>\n  fun unregister(): Promise<Boolean>\n  fun showNotification(title: String, options:
NotificationOptions = definedExternally): Promise<Unit>\n  fun getNotifications(filter: GetNotificationOptions =
definedExternally): Promise<Array<Notification>>\n  fun methodName(): Promise<dynamic>\n}\n\n**\n *
Exposes the JavaScript
[ServiceWorkerContainer](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerContainer) to Kotlin\n
*\npublic external abstract class ServiceWorkerContainer : EventTarget {\n  open val controller:
ServiceWorker?\n  open val ready: Promise<ServiceWorkerRegistration>\n  open var oncontrollerchange:
((Event) -> dynamic)?\n  open var onmessage: ((MessageEvent) -> dynamic)?\n  fun register(scriptURL: String,
options: RegistrationOptions = definedExternally): Promise<ServiceWorkerRegistration>\n  fun
getRegistration(clientURL: String = definedExternally): Promise<Any?>\n  fun getRegistrations():
Promise<Array<ServiceWorkerRegistration>>\n  fun startMessages()\n}\n\npublic external interface
RegistrationOptions {\n  var scope: String?\n  get() = definedExternally\n  set(value) = definedExternally\n
var type: WorkerType? /* = WorkerType.CLASSIC */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun RegistrationOptions(scope: String? =
undefined, type: WorkerType? = WorkerType.CLASSIC): RegistrationOptions {\n  val o = js(\"({})\")\n
o[\"scope\"] = scope\n o[\"type\"] = type\n return o\n}\n\n**\n * Exposes the JavaScript
[ServiceWorkerMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerMessageEvent) to
Kotlin\n *\npublic external open class ServiceWorkerMessageEvent(type: String, eventInitDict:
ServiceWorkerMessageEventInit = definedExternally) : Event {\n  open val data: Any?\n  open val origin:
String\n  open val lastEventId: String\n  open val source: UnionMessagePortOrServiceWorker?\n  open val
ports: Array<out MessagePort>?\n\n  companion object {\n    val NONE: Short\n    val
CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val BUBBLING_PHASE: Short\n
}\n}\n\npublic external interface ServiceWorkerMessageEventInit : EventInit {\n  var data: Any?\n  get() =
definedExternally\n  set(value) = definedExternally\n  var origin: String?\n  get() = definedExternally\n
set(value) = definedExternally\n  var lastEventId: String?\n  get() = definedExternally\n  set(value) =
definedExternally\n  var source: UnionMessagePortOrServiceWorker?\n  get() = definedExternally\n
set(value) = definedExternally\n  var ports: Array<MessagePort>?\n  get() = definedExternally\n  set(value)
= definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ServiceWorkerMessageEventInit(data:
Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source:
UnionMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles: Boolean? =
false, cancelable: Boolean? = false, composed: Boolean? = false): ServiceWorkerMessageEventInit {\n  val o =
js(\"({})\")\n  o[\"data\"] = data\n  o[\"origin\"] = origin\n  o[\"lastEventId\"] = lastEventId\n  o[\"source\"] =
source\n  o[\"ports\"] = ports\n  o[\"bubbles\"] = bubbles\n  o[\"cancelable\"] = cancelable\n  o[\"composed\"] =
composed\n  return o\n}\n\n**\n * Exposes the JavaScript
[ServiceWorkerGlobalScope](https://developer.mozilla.org/en/docs/Web/API/ServiceWorkerGlobalScope) to
Kotlin\n *\npublic external abstract class ServiceWorkerGlobalScope : WorkerGlobalScope {\n  open val clients:

```

```

Clients\n    open val registration: ServiceWorkerRegistration\n    open var oninstall: ((Event) -> dynamic)?\n    open
var onactivate: ((Event) -> dynamic)?\n    open var onfetch: ((FetchEvent) -> dynamic)?\n    open var
onforeignfetch: ((Event) -> dynamic)?\n    open var onmessage: ((MessageEvent) -> dynamic)?\n    open var
onnotificationclick: ((NotificationEvent) -> dynamic)?\n    open var onnotificationclose: ((NotificationEvent) ->
dynamic)?\n    open var onfunctionalevent: ((Event) -> dynamic)?\n    fun skipWaiting():

```

Promise<Unit>\n}\n\n/\*\*\n \* Exposes the JavaScript

```

[Client](https://developer.mozilla.org/en/docs/Web/API/Client) to Kotlin\n    *\npublic external abstract class Client :
UnionClientOrMessagePortOrServiceWorker {\n    open val url: String\n    open val frameType: FrameType\n
open val id: String\n    fun postMessage(message: Any?, transfer: Array<dynamic> = definedExternally)\n}\n\n/**\n * Exposes the JavaScript [WindowClient](https://developer.mozilla.org/en/docs/Web/API/WindowClient) to
Kotlin\n    *\npublic external abstract class WindowClient : Client {\n    open val visibilityState: dynamic\n    open
val focused: Boolean\n    fun focus(): Promise<WindowClient>\n    fun navigate(url: String):

```

Promise<WindowClient>\n}\n\n/\*\*\n \* Exposes the JavaScript

```

[Clients](https://developer.mozilla.org/en/docs/Web/API/Clients) to Kotlin\n    *\npublic external abstract class
Clients {\n    fun get(id: String): Promise<Any?>\n    fun matchAll(options: ClientQueryOptions =
definedExternally): Promise<Array<Client>>\n    fun openWindow(url: String): Promise<WindowClient?>\n    fun
claim(): Promise<Unit>\n}\n\npublic external interface ClientQueryOptions {\n    var includeUncontrolled:
Boolean? /* = false */\n    get() = definedExternally\n    set(value) = definedExternally\n    var type:
ClientType? /* = ClientType.WINDOW */\n    get() = definedExternally\n    set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",

```

\"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun

ClientQueryOptions(includeUncontrolled: Boolean? = false, type: ClientType? = ClientType.WINDOW):

```

ClientQueryOptions {\n    val o = js(\"({})\")\n    o[\"includeUncontrolled\"] = includeUncontrolled\n    o[\"type\"] =
type\n    return o\n}\n\n/**\n * Exposes the JavaScript

```

```

[ExtendableEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableEvent) to Kotlin\n    *\npublic external
open class ExtendableEvent(type: String, eventInitDict: ExtendableEventInit = definedExternally) : Event {\n    fun
waitUntil(f: Promise<Any?>)\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE:
Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n\n    public external interface
ExtendableEventInit : EventInit\n\n    @Suppress(\"INVISIBLE_REFERENCE\",

```

\"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ExtendableEventInit(bubbles:

```

Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ExtendableEventInit {\n    val o =
js(\"({})\")\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript

```

```

[InstallEvent](https://developer.mozilla.org/en/docs/Web/API/InstallEvent) to Kotlin\n    *\npublic external open
class InstallEvent(type: String, eventInitDict: ExtendableEventInit = definedExternally) : ExtendableEvent {\n    fun
registerForeignFetch(options: ForeignFetchOptions)\n\n    companion object {\n        val NONE: Short\n        val
CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n\n    public external interface ForeignFetchOptions {\n        var scopes: Array<String>?\n        var origins:
Array<String>?\n    }\n\n    @Suppress(\"INVISIBLE_REFERENCE\",

```

\"INVISIBLE\_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchOptions(scopes:

```

Array<String>?, origins: Array<String>?): ForeignFetchOptions {\n    val o = js(\"({})\")\n    o[\"scopes\"] =
scopes\n    o[\"origins\"] = origins\n    return o\n}\n\n/**\n * Exposes the JavaScript

```

```

[FetchEvent](https://developer.mozilla.org/en/docs/Web/API/FetchEvent) to Kotlin\n    *\npublic external open class
FetchEvent(type: String, eventInitDict: FetchEventInit) : ExtendableEvent {\n    open val request: Request\n    open
val clientId: String?\n    open val isReload: Boolean\n    fun respondWith(r: Promise<Response>)\n\n    companion
object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val
BUBBLING_PHASE: Short\n    }\n\n    public external interface FetchEventInit : ExtendableEventInit {\n        var
request: Request?\n        var clientId: String? /* = null */\n        get() = definedExternally\n        set(value) =

```

```

definedExternally\n    var isReload: Boolean? /* = false */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun FetchEventInit(request: Request?,
clientId: String? = null, isReload: Boolean? = false, bubbles: Boolean? = false, cancelable: Boolean? = false,
composed: Boolean? = false): FetchEventInit {\n    val o = js(\"({})\")\n    o[\"request\"] = request\n    o[\"clientId\"]
= clientId\n    o[\"isReload\"] = isReload\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\npublic external open class ForeignFetchEvent(type: String,
eventInitDict: ForeignFetchEventInit) : ExtendableEvent {\n    open val request: Request\n    open val origin:
String\n    fun respondWith(r: Promise<ForeignFetchResponse>)\n\n    companion object {\n        val NONE:
Short\n        val CAPTURING_PHASE: Short\n        val AT_TARGET: Short\n        val BUBBLING_PHASE:
Short\n    }\n}\n\npublic external interface ForeignFetchEventInit : ExtendableEventInit {\n    var request:
Request?\n    var origin: String? /* = \"null\" */\n        get() = definedExternally\n        set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchEventInit(request:
Request?, origin: String? = \"null\", bubbles: Boolean? = false, cancelable: Boolean? = false, composed: Boolean? =
false): ForeignFetchEventInit {\n    val o = js(\"({})\")\n    o[\"request\"] = request\n    o[\"origin\"] = origin\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return
o\n}\n\npublic external interface ForeignFetchResponse {\n    var response: Response?\n    var origin: String?\n    get() = definedExternally\n        set(value) = definedExternally\n    var headers: Array<String>?\n        get() =
definedExternally\n        set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ForeignFetchResponse(response:
Response?, origin: String? = undefined, headers: Array<String>? = undefined): ForeignFetchResponse {\n    val o =
js(\"({})\")\n    o[\"response\"] = response\n    o[\"origin\"] = origin\n    o[\"headers\"] = headers\n    return
o\n}\n\n/**\n * Exposes the JavaScript
[ExtendableMessageEvent](https://developer.mozilla.org/en/docs/Web/API/ExtendableMessageEvent) to Kotlin\n
*/\n\npublic external open class ExtendableMessageEvent(type: String, eventInitDict: ExtendableMessageEventInit =
definedExternally) : ExtendableEvent {\n    open val data: Any?\n    open val origin: String\n    open val lastEventId:
String\n    open val source: UnionClientOrMessagePortOrServiceWorker?\n    open val ports: Array<out
MessagePort>?\n\n    companion object {\n        val NONE: Short\n        val CAPTURING_PHASE: Short\n        val
AT_TARGET: Short\n        val BUBBLING_PHASE: Short\n    }\n}\n\npublic external interface
ExtendableMessageEventInit : ExtendableEventInit {\n    var data: Any?\n        get() = definedExternally\n    set(value) = definedExternally\n    var origin: String?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var lastEventId: String?\n        get() = definedExternally\n        set(value) =
definedExternally\n    var source: UnionClientOrMessagePortOrServiceWorker?\n        get() = definedExternally\n    set(value) = definedExternally\n    var ports: Array<MessagePort>?\n        get() = definedExternally\n    set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun ExtendableMessageEventInit(data:
Any? = undefined, origin: String? = undefined, lastEventId: String? = undefined, source:
UnionClientOrMessagePortOrServiceWorker? = undefined, ports: Array<MessagePort>? = undefined, bubbles:
Boolean? = false, cancelable: Boolean? = false, composed: Boolean? = false): ExtendableMessageEventInit {\n    val
o = js(\"({})\")\n    o[\"data\"] = data\n    o[\"origin\"] = origin\n    o[\"lastEventId\"] = lastEventId\n    o[\"source\"] = source\n    o[\"ports\"] = ports\n    o[\"bubbles\"] = bubbles\n    o[\"cancelable\"] = cancelable\n    o[\"composed\"] = composed\n    return o\n}\n\n/**\n * Exposes the JavaScript
[Cache](https://developer.mozilla.org/en/docs/Web/API/Cache) to Kotlin\n
*/\n\npublic external abstract class Cache
{\n    fun match(request: dynamic, options: CacheQueryOptions = definedExternally): Promise<Any?>\n    fun
matchAll(request: dynamic = definedExternally, options: CacheQueryOptions = definedExternally):
Promise<Array<Response>>\n    fun add(request: dynamic): Promise<Unit>\n    fun addAll(requests:
Array<dynamic>): Promise<Unit>\n    fun put(request: dynamic, response: Response): Promise<Unit>\n    fun

```

```

delete(request: dynamic, options: CacheQueryOptions = definedExternally): Promise<Boolean>\n fun
keys(request: dynamic = definedExternally, options: CacheQueryOptions = definedExternally):
Promise<Array<Request>>\n}\n\npublic external interface CacheQueryOptions {\n var ignoreSearch: Boolean? /*
= false */\n get() = definedExternally\n set(value) = definedExternally\n var ignoreMethod: Boolean? /* =
false */\n get() = definedExternally\n set(value) = definedExternally\n var ignoreVary: Boolean? /* =
false */\n get() = definedExternally\n set(value) = definedExternally\n var cacheName: String?\n
get() = definedExternally\n set(value) = definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CacheQueryOptions(ignoreSearch:
Boolean? = false, ignoreMethod: Boolean? = false, ignoreVary: Boolean? = false, cacheName: String? = undefined):
CacheQueryOptions {\n val o = js(\"({})\")\n o[\"ignoreSearch\"] = ignoreSearch\n o[\"ignoreMethod\"] =
ignoreMethod\n o[\"ignoreVary\"] = ignoreVary\n o[\"cacheName\"] = cacheName\n return o\n}\n\npublic
external interface CacheBatchOperation {\n var type: String?\n get() = definedExternally\n set(value) =
definedExternally\n var request: Request?\n get() = definedExternally\n set(value) = definedExternally\n
var response: Response?\n get() = definedExternally\n set(value) = definedExternally\n var options:
CacheQueryOptions?\n get() = definedExternally\n set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n@kotlin.internal.InlineOnly\npublic inline fun CacheBatchOperation(type: String? =
undefined, request: Request? = undefined, response: Response? = undefined, options: CacheQueryOptions? =
undefined): CacheBatchOperation {\n val o = js(\"({})\")\n o[\"type\"] = type\n o[\"request\"] = request\n
o[\"response\"] = response\n o[\"options\"] = options\n return o\n}\n\n/**\n * Exposes the JavaScript
[CacheStorage](https://developer.mozilla.org/en/docs/Web/API/CacheStorage) to Kotlin\n */\npublic external
abstract class CacheStorage {\n fun match(request: dynamic, options: CacheQueryOptions = definedExternally):
Promise<Any?>\n fun has(cacheName: String): Promise<Boolean>\n fun open(cacheName: String):
Promise<Cache>\n fun delete(cacheName: String): Promise<Boolean>\n fun keys():
Promise<Array<String>>\n}\n\npublic external open class FunctionalEvent : ExtendableEvent {\n companion
object {\n val NONE: Short\n val CAPTURING_PHASE: Short\n val AT_TARGET: Short\n val
BUBBLING_PHASE: Short\n }\n}\n\npublic external interface UnionMessagePortOrServiceWorker\n\npublic
external interface UnionClientOrMessagePortOrServiceWorker\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface ServiceWorkerState {\n companion object\n}\n\npublic inline val
ServiceWorkerState.Companion.INSTALLING: ServiceWorkerState get() =
\"installing\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.INSTALLED: ServiceWorkerState get() =
\"installed\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.ACTIVATING: ServiceWorkerState get() =
\"activating\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.ACTIVATED: ServiceWorkerState get() =
\"activated\".asDynamic().unsafeCast<ServiceWorkerState>()\n\npublic inline val
ServiceWorkerState.Companion.REDUNDANT: ServiceWorkerState get() =
\"redundant\".asDynamic().unsafeCast<ServiceWorkerState>()\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external
interface FrameType {\n companion object\n}\n\npublic inline val FrameType.Companion.AUXILIARY:
FrameType get() = \"auxiliary\".asDynamic().unsafeCast<FrameType>()\n\npublic inline val
FrameType.Companion.TOP_LEVEL: FrameType get() = \"top-
level\".asDynamic().unsafeCast<FrameType>()\n\npublic inline val FrameType.Companion.NESTED: FrameType
get() = \"nested\".asDynamic().unsafeCast<FrameType>()\n\npublic inline val FrameType.Companion.NONE:
FrameType get() = \"none\".asDynamic().unsafeCast<FrameType>()\n\n/* please, don't implement this interface!
*/\n@JsName(\"null\")\n@Suppress(\"NESTED_CLASS_IN_EXTERNAL_INTERFACE\")\npublic external

```

```

interface ClientType {\n  companion object\n}\n\npublic inline val ClientType.Companion.WINDOW: ClientType
get() = \"window\".asDynamic().unsafeCast<ClientType>()\n\npublic inline val ClientType.Companion.WORKER:
ClientType get() = \"worker\".asDynamic().unsafeCast<ClientType>()\n\npublic inline val
ClientType.Companion.SHAREDWORKER: ClientType get() =
\"sharedworker\".asDynamic().unsafeCast<ClientType>()\n\npublic inline val ClientType.Companion.ALL:
ClientType get() = \"all\".asDynamic().unsafeCast<ClientType>()\"/*\n * Copyright 2010-2021 JetBrains s.r.o. and
Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that
can be found in the license/LICENSE.txt file.\n */\n\n// NOTE: THIS FILE IS AUTO-GENERATED, DO NOT
EDIT!\n// See github.com/kotlin/dukat for details\n\npackage org.w3c.xhr\n\nimport kotlin.js.*\nimport
org.khronos.webgl.*\nimport org.w3c.dom.*\nimport org.w3c.dom.events.*\nimport org.w3c.files.*\n\n/**\n *
Exposes the JavaScript
[XMLHttpRequestEventTarget](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequestEventTarget) to
Kotlin\n */\n\npublic external abstract class XMLHttpRequestEventTarget : EventTarget {\n  open var onloadstart:
((ProgressEvent) -> dynamic)?\n  open var onprogress: ((ProgressEvent) -> dynamic)?\n  open var onabort:
((Event) -> dynamic)?\n  open var onerror: ((Event) -> dynamic)?\n  open var onload: ((Event) -> dynamic)?\n
open var ontimeout: ((Event) -> dynamic)?\n  open var onloadend: ((Event) -> dynamic)?\n}\n\npublic external
abstract class XMLHttpRequestUpload : XMLHttpRequestEventTarget\n\n/**\n * Exposes the JavaScript
[XMLHttpRequest](https://developer.mozilla.org/en/docs/Web/API/XMLHttpRequest) to Kotlin\n */\n\npublic
external open class XMLHttpRequest : XMLHttpRequestEventTarget {\n  var onreadystatechange: ((Event) ->
dynamic)?\n  open val readyState: Short\n  var timeout: Int\n  var withCredentials: Boolean\n  open val upload:
XMLHttpRequestUpload\n  open val responseURL: String\n  open val status: Short\n  open val statusText:
String\n  var responseType: XMLHttpRequestResponseType\n  open val response: Any?\n  open val
responseText: String\n  open val responseXML: Document?\n  fun open(method: String, url: String)\n  fun
open(method: String, url: String, async: Boolean, username: String? = definedExternally, password: String? =
definedExternally)\n  fun setRequestHeader(name: String, value: String)\n  fun send(body: dynamic =
definedExternally)\n  fun abort()\n  fun getResponseHeader(name: String): String?\n  fun
getAllResponseHeaders(): String\n  fun overrideMimeType(mime: String)\n\n  companion object {\n    val
UNSENT: Short\n    val OPENED: Short\n    val HEADERS_RECEIVED: Short\n    val LOADING:
Short\n    val DONE: Short\n  }\n}\n\n/**\n * Exposes the JavaScript
[FormData](https://developer.mozilla.org/en/docs/Web/API/FormData) to Kotlin\n */\n\npublic external open class
FormData(form: HTMLFormElement = definedExternally) {\n  fun append(name: String, value: String)\n  fun
append(name: String, value: Blob, filename: String = definedExternally)\n  fun delete(name: String)\n  fun
get(name: String): dynamic\n  fun getAll(name: String): Array<dynamic>\n  fun has(name: String): Boolean\n
fun set(name: String, value: String)\n  fun set(name: String, value: Blob, filename: String =
definedExternally)\n}\n\n/**\n * Exposes the JavaScript
[ProgressEvent](https://developer.mozilla.org/en/docs/Web/API/ProgressEvent) to Kotlin\n */\n\npublic external open
class ProgressEvent(type: String, eventInitDict: ProgressEventInit = definedExternally) : Event {\n  open val
lengthComputable: Boolean\n  open val loaded: Number\n  open val total: Number\n\n  companion object {\n
val NONE: Short\n    val CAPTURING_PHASE: Short\n    val AT_TARGET: Short\n    val
BUBBLING_PHASE: Short\n  }\n}\n\npublic external interface ProgressEventInit : EventInit {\n  var
lengthComputable: Boolean? /* = false */\n  get() = definedExternally\n  set(value) = definedExternally\n
var loaded: Number? /* = 0 */\n  get() = definedExternally\n  set(value) = definedExternally\n  var total:
Number? /* = 0 */\n  get() = definedExternally\n  set(value) =
definedExternally\n}\n\n@Suppress(\"INVISIBLE_REFERENCE\",
\"INVISIBLE_MEMBER\")\n\n@kotlin.internal.InlineOnly\n\npublic inline fun ProgressEventInit(lengthComputable:
Boolean? = false, loaded: Number? = 0, total: Number? = 0, bubbles: Boolean? = false, cancelable: Boolean? =
false, composed: Boolean? = false): ProgressEventInit {\n  val o = js(\"({})\")\n  o[\"lengthComputable\"] =
lengthComputable\n  o[\"loaded\"] = loaded\n  o[\"total\"] = total\n  o[\"bubbles\"] = bubbles\n

```

```

o["cancelable"] = cancelable\n  o["composed"] = composed\n  return o\n}\n\n/* please, don't implement this
interface! */\n@JsName("null")\n@Suppress("NESTED_CLASS_IN_EXTERNAL_INTERFACE")\npublic
external interface XMLHttpRequestResponseType {\n  companion object\n}\n\npublic inline val
XMLHttpRequestResponseType.Companion.EMPTY: XMLHttpRequestResponseType get() =
"\n".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.ARRAYBUFFER: XMLHttpRequestResponseType get() =
"arraybuffer".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.BLOB: XMLHttpRequestResponseType get() =
"blob".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.DOCUMENT: XMLHttpRequestResponseType get() =
"document".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.JSON: XMLHttpRequestResponseType get() =
"json".asDynamic().unsafeCast<XMLHttpRequestResponseType>()\n\npublic inline val
XMLHttpRequestResponseType.Companion.TEXT: XMLHttpRequestResponseType get() =
"text".asDynamic().unsafeCast<XMLHttpRequestResponseType>()","/>\n * Copyright 2010-2018 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\nimport
kotlin.annotation.AnnotationRetention.BINARY\nimport kotlin.annotation.AnnotationRetention.SOURCE\nimport
kotlin.annotation.AnnotationTarget.*\nimport kotlin.internal.RequireKotlin\nimport
kotlin.internal.RequireKotlinVersionKind\nimport kotlin.reflect.KClass\n\n/**\n * Signals that the annotated
annotation class is a marker of an experimental API.\n * Any declaration annotated with that marker is
considered an experimental declaration\n * and its call sites should accept the experimental aspect of it either by
using [UseExperimental],\n * or by being annotated with that marker themselves, effectively causing further
propagation of that experimental aspect.\n * This class is deprecated in favor of a more general approach
provided by [RequiresOptIn]/[OptIn].\n
*/\n\n@Target(ANNOTATION_CLASS)\n@Retention(BINARY)\n@SinceKotlin("1.2")\n@RequireKotlin("1.2.50", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\n@Deprecated("Please use RequiresOptIn
instead.")\npublic annotation class Experimental(val level: Level = Level.ERROR) {\n  /**\n   * Severity of the
diagnostic that should be reported on usages of experimental API which did not explicitly accept the experimental
aspect\n   * of that API either by using [UseExperimental] or by being annotated with the corresponding marker
annotation.\n   */\n  public enum class Level {\n    /** Specifies that a warning should be reported on incorrect
usages of this experimental API. */\n    WARNING,\n    /** Specifies that an error should be reported on
incorrect usages of this experimental API. */\n    ERROR,\n  }\n}\n\n/**\n * Allows to use experimental API
denoted by the given markers in the annotated file, declaration, or expression.\n * If a declaration is annotated
with [UseExperimental], its usages are **not** required to opt-in to that experimental API.\n * This class is
deprecated in favor of a more general approach provided by [RequiresOptIn]/[OptIn].\n */\n\n@Target(\n  CLASS,
PROPERTY, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION,
PROPERTY_GETTER, PROPERTY_SETTER, EXPRESSION, FILE,
TYPEALIAS)\n\n@Retention(SOURCE)\n@SinceKotlin("1.2")\n@RequireKotlin("1.2.50", versionKind =
RequireKotlinVersionKind.COMPILER_VERSION)\n@Deprecated("Please use OptIn instead.",
ReplaceWith("OptIn(*markerClass)", "kotlin.OptIn"))\npublic annotation class UseExperimental(\n  vararg val
markerClass: KClass<out Annotation>)\n}\n\n@Target(CLASS, PROPERTY, CONSTRUCTOR, FUNCTION,
TYPEALIAS)\n@Retention(BINARY)\ninternal annotation class WasExperimental(\n  vararg val markerClass:
KClass<out Annotation>)\n}\n", "package kotlin\n\nimport kotlin.annotation.AnnotationTarget.*\n\n/**\n * This
annotation marks the standard library API that is considered experimental and is not subject to the\n * [general
compatibility guarantees](https://kotlinlang.org/docs/reference/evolution/components-stability.html) given for the
standard library:\n * the behavior of such API may be changed or the API may be removed completely in any
further release.\n * Beware using the annotated API especially if you're developing a library, since your library

```

might become binary incompatible with the future versions of the standard library. Any usage of a declaration annotated with `@ExperimentalStdlibApi` must be accepted either by annotating that usage with the `[OptIn]` annotation, e.g. `@OptIn(ExperimentalStdlibApi::class)` or by using the compiler argument `-Xopt-in=kotlin.ExperimentalStdlibApi`.

`@Suppress("DEPRECATION") @Experimental(level = Experimental.Level.ERROR) @RequiresOptIn(level = RequiresOptIn.Level.ERROR) @Retention(AnnotationRetention.BINARY) @Target(CLASS, ANNOTATION_CLASS, PROPERTY, FIELD, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER, PROPERTY_SETTER, TYPEALIAS)`

`@MustBeDocumented @SinceKotlin("1.3")` public annotation class `ExperimentalStdlibApi`

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```

package kotlin
import kotlin.annotation.AnnotationTarget
import kotlin.experimental.ExperimentalTypeInference
/**
 * Allows to infer generic type arguments of a function from the calls in the annotated function parameter of that function.
 * When this annotation is placed on a generic function parameter of a function, it enables to infer the type arguments of that generic function from the lambda body passed to that parameter.
 * The calls that affect inference are either members of the receiver type of an annotated function parameter or extensions for that type. The extensions must be themselves annotated with @BuilderInference.
 * Example: we declare
 * fun <T> sequence(@BuilderInference block: suspend SequenceScope<T>().->Unit): Sequence<T>
 * and use it like
 * val result = sequence {
 *     yield("result")
 * }
 * Here the type argument of the resulting sequence is inferred to `String` from the argument of the [SequenceScope.yield] function, that is called inside the lambda passed to [sequence].
 * Note: this annotation is experimental, see [ExperimentalTypeInference] on how to opt-in for it.
 */
@Target(VALUE_PARAMETER, FUNCTION, PROPERTY)
@Retention(AnnotationRetention.BINARY)
@SinceKotlin("1.3")
@ExperimentalTypeInference
public annotation class BuilderInference
/**
 * Enables overload selection based on the type of the value returned from lambda argument.
 * When two or more function overloads have otherwise the same parameter lists that differ only in the return type of a functional parameter, this annotation enables overload selection by the type of the value returned from the lambda function passed to this functional parameter.
 * Example:
 * @OverloadResolutionByLambdaReturnType
 * fun create(intProducer: () -> Int): Int
 * fun create(doubleProducer: () -> Double): Double
 * val newValue = create { 3.14 }
 * The annotation being applied to one of overloads allows to resolve this ambiguity by analyzing what value is returned from the lambda function.
 * This annotation is also used to discriminate the annotated overloads in case if overload selection still cannot choose one of them even taking in account the result of lambda parameter analysis. In that case a warning is reported.
 * Note: this annotation is experimental, see [ExperimentalTypeInference] on how to opt-in for it.
 */
@Target(FUNCTION)
@Retention(AnnotationRetention.BINARY)
@SinceKotlin("1.4")
@ExperimentalTypeInference
public annotation class OverloadResolutionByLambdaReturnType
/**
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 */
package kotlin
import kotlin.annotation.AnnotationTarget
import kotlin.internal.RequireKotlin
import kotlin.internal.RequireKotlinVersionKind
/**
 * The experimental multiplatform support API marker.
 * Any usage of a declaration annotated with @ExperimentalMultiplatform must be accepted either by annotating that usage with the [OptIn] annotation, e.g. @OptIn(ExperimentalMultiplatform::class) or by using the compiler argument -Xopt-in=kotlin.ExperimentalMultiplatform.
 */
@Suppress("DEPRECATION")
@Experimental
@RequiresOptIn
@MustBeDocumented
@Target(CLASS, ANNOTATION_CLASS, PROPERTY, FIELD, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER, PROPERTY_SETTER)

```

```

TYPEALIAS\n\n@Retention(AnnotationRetention.BINARY)\n@RequireKotlin("1.2.50", versionKind =
RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class ExperimentalMultiplatform\n\n/**\n * Marks an expected annotation class that it isn't required to have actual counterparts in all platforms.\n * This\n * annotation is only applicable to `expect` annotation classes in multi-platform projects and marks that class as\n * "optional".\n * Optional expected class is allowed to have no corresponding actual class on the platform. Optional\n * annotations can only be used\n * to annotate something, not as types in signatures. If an optional annotation has no\n * corresponding actual class on a platform,\n * the annotation entries where it's used are simply erased when\n * compiling code on that platform.\n * Note: this annotation is experimental, see [ExperimentalMultiplatform] on\n * how to opt-in for it.\n */\n@Target(ANNOTATION_CLASS)\n@Retention(AnnotationRetention.BINARY)\n@ExperimentalMultiplatform\n@RequireKotlin("1.2.50", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic\nannotation class OptionalExpectation\n\n", /*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming\n * Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n * license/LICENSE.txt file.\n */\npackage kotlin\n\nimport\nkotlin.annotation.AnnotationRetention.BINARY\nimport kotlin.annotation.AnnotationRetention.SOURCE\nimport\nkotlin.annotation.AnnotationTarget\nimport kotlin.internal.RequireKotlin\nimport\nkotlin.internal.RequireKotlinVersionKind\nimport kotlin.reflect.KClass\n\n/**\n * Signals that the annotated\n * annotation class is a marker of an API that requires an explicit opt-in.\n * Call sites of any declaration annotated\n * with that marker should opt in to the API either by using [OptIn],\n * or by being annotated with that marker\n * themselves, effectively causing further propagation of the opt-in requirement.\n * This class requires opt-in itself\n * and can only be used with the compiler argument `-Xopt-in=kotlin.RequiresOptIn`.\n * @property message\n * message to be reported on usages of API without an explicit opt-in, or empty string for the default message.\n *\n * The default message is: "This declaration is experimental and its usage should be marked with 'Marker'\n * or 'OptIn(Marker::class)", where `Marker` is the opt-in requirement marker.\n * @property level specifies\n * how usages of API without an explicit opt-in are reported in code.\n */\n@Target(ANNOTATION_CLASS)\n@Retention(BINARY)\n@SinceKotlin("1.3")\n@RequireKotlin("1.3.70\n", versionKind = RequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class RequiresOptIn(\n    val message: String = "",\n    val level: Level = Level.ERROR\n) {\n    /**\n     * Severity of the diagnostic that\n     * should be reported on usages which did not explicitly opt into\n     * the API either by using [OptIn] or by being\n     * annotated with the corresponding marker annotation.\n     */\n    public enum class Level {\n        /** Specifies that a\n         * warning should be reported on incorrect usages of this API. */\n        WARNING,\n        /** Specifies that an error\n         * should be reported on incorrect usages of this API. */\n        ERROR,\n    }\n}\n\n/**\n * Allows to use the API\n * denoted by the given markers in the annotated file, declaration, or expression.\n * If a declaration is annotated with\n * [OptIn], its usages are **not** required to opt in to that API.\n * This class requires opt-in itself and can only be\n * used with the compiler argument `-Xopt-in=kotlin.RequiresOptIn`.\n */\n@Target(\n    CLASS, PROPERTY,\n    LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION, PROPERTY_GETTER,\n    PROPERTY_SETTER, EXPRESSION, FILE,\n    TYPEALIAS\n)\n@Retention(SOURCE)\n@SinceKotlin("1.3")\n@RequireKotlin("1.3.70", versionKind =\nRequireKotlinVersionKind.COMPILER_VERSION)\npublic annotation class OptIn(\n    vararg val markerClass:\n    KClass<out Annotation>\n)\n\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language\n * contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the\n * license/LICENSE.txt file.\n */\npackage kotlin.collections\n\nimport kotlin.js.JsName\n\n/**\n * Provides a skeletal\n * implementation of the read-only [Collection] interface.\n * @param E the type of elements contained in the\n * collection. The collection is covariant in its element type.\n */\n@SinceKotlin("1.1")\npublic abstract class\nAbstractCollection<out E> protected constructor() : Collection<E> {\n    abstract override val size: Int\n    abstract\n    override fun iterator(): Iterator<E>\n\n    override fun contains(element: @UnsafeVariance E): Boolean = any { it\n    == element }\n\n    override fun containsAll(elements: Collection<@UnsafeVariance E>): Boolean =\n    elements.all { contains(it) } // use when js will support bound refs: elements.all(this::contains)\n\n    override fun

```

```

isEmpty(): Boolean = size == 0\n\n override fun toString(): String = joinToString(", ", "[", "]") {n    if (it
=== this) \"(this Collection)\" else it.toString()\n } \n\n /**\n * Returns new array of type `Array<Any?>` with
the elements of this collection.\n *\n @JsName(\"toArray\")\n protected open fun toArray(): Array<Any?> =
copyToArrayImpl(this)\n\n /**\n * Fills the provided [array] or creates new array of the same type\n * and
fills it with the elements of this collection.\n *\n protected open fun <T> toArray(array: Array<T>): Array<T>
= copyToArrayImpl(this, array)\n }\n\n\", \"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage kotlin.collections\n\nprivate enum class State {\n Ready,\n
NotReady,\n Done,\n Failed\n}\n\n/**\n * A base class to simplify implementing iterators so that
implementations only have to implement [computeNext]\n * to implement the iterator, calling [done] when the
iteration is complete.\n *\n\npublic abstract class AbstractIterator<T> : Iterator<T> {\n private var state =
State.NotReady\n private var nextValue: T? = null\n\n override fun hasNext(): Boolean {\n require(state !=
State.Failed)\n return when (state) {\n State.Done -> false\n State.Ready -> true\n else ->
tryToComputeNext()\n }\n }\n\n override fun next(): T {\n if (!hasNext()) throw
NoSuchElementException()\n state = State.NotReady\n @Suppress(\"UNCHECKED_CAST\")\n return nextValue as T\n }\n\n private fun tryToComputeNext(): Boolean {\n state = State.Failed\n
computeNext()\n return state == State.Ready\n }\n\n /**\n * Computes the next item in the iterator.\n
*\n * This callback method should call one of these two methods:\n * * [setNext] with the next value of
the iteration\n * * [done] to indicate there are no more elements\n * * Failure to call either method will
result in the iteration terminating with a failed state\n *\n\n abstract protected fun computeNext(): Unit\n\n
/**\n * Sets the next value in the iteration, called from the [computeNext] function\n *\n protected fun
setNext(value: T): Unit {\n nextValue = value\n state = State.Ready\n }\n\n /**\n * Sets the state to
done so that the iteration terminates.\n *\n\n protected fun done() {\n state = State.Done\n }\n\n\", \"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n\n/*\n * Based on
GWT AbstractList\n * Copyright 2007 Google Inc.\n *\n\npackage kotlin.collections\n\n/*\n * Provides a skeletal
implementation of the read-only [List] interface.\n *\n * This class is intended to help implementing read-only lists
so it doesn't support concurrent modification tracking.\n *\n * @param E the type of elements contained in the list.
The list is covariant in its element type.\n *\n\n@SinceKotlin(\"1.1\")\n\npublic abstract class AbstractList<out E>
protected constructor() : AbstractCollection<E>(), List<E> {\n abstract override val size: Int\n abstract override
fun get(index: Int): E\n\n override fun iterator(): Iterator<E> = IteratorImpl()\n\n override fun indexOf(element:
@UnsafeVariance E): Int = indexOfFirst { it == element }\n\n override fun lastIndexOf(element:
@UnsafeVariance E): Int = indexOfLast { it == element }\n\n override fun listIterator(): ListIterator<E> =
ListIteratorImpl(0)\n\n override fun listIterator(index: Int): ListIterator<E> = ListIteratorImpl(index)\n\n
override fun subList(fromIndex: Int, toIndex: Int): List<E> = SubList(this, fromIndex, toIndex)\n\n private class
SubList<out E>(private val list: AbstractList<E>, private val fromIndex: Int, toIndex: Int) : AbstractList<E>(),
RandomAccess {\n private var _size: Int = 0\n\n init {\n checkRangeIndexes(fromIndex, toIndex,
list.size)\n this._size = toIndex - fromIndex\n }\n\n override fun get(index: Int): E {\n
checkElementIndex(index, _size)\n return list[fromIndex + index]\n }\n\n override val size: Int
get() = _size\n }\n\n /**\n * Compares this list with other list instance with the ordered structural equality.\n
*\n * @return true, if [other] instance is a [List] of the same size, which contains the same elements in the same
order.\n *\n\n override fun equals(other: Any?): Boolean {\n if (other === this) return true\n if (other !is
List<*>) return false\n\n return orderedEquals(this, other)\n }\n\n /**\n * Returns the hash code value for
this list.\n *\n\n override fun hashCode(): Int = orderedHashCode(this)\n\n private open inner class IteratorImpl
: Iterator<E> {\n /** the index of the item that will be returned on the next call to [next]`()` *\n\n protected
var index = 0\n\n override fun hasNext(): Boolean = index < size\n\n override fun next(): E {\n if
(!hasNext()) throw NoSuchElementException()\n return get(index++)\n }\n }\n\n /**\n *
Implementation of [ListIterator] for abstract lists.\n *\n\n private open inner class ListIteratorImpl(index: Int) :

```

```

IteratorImpl(), ListIterator<E> {\n
    init {\n
        checkPositionIndex(index, this@AbstractList.size)\n
    }\n
    this.index = index\n
    }\n
    override fun hasPrevious(): Boolean = index > 0\n
    override fun\n
    nextIndex(): Int = index\n
    override fun previous(): E {\n
        if (!hasPrevious()) throw\n
        NoSuchElementException()\n
        return get(--index)\n
    }\n
    override fun previousIndex(): Int = index -\n
    1\n
    }\n
    internal companion object {\n
        internal fun checkElementIndex(index: Int, size: Int) {\n
            if\n
            (index < 0 || index >= size) {\n
                throw IndexOutOfBoundsException("\n
                index: $index, size: $size")\n
            }\n
        }\n
        internal fun checkPositionIndex(index: Int, size: Int) {\n
            if (index < 0 || index > size) {\n
                throw IndexOutOfBoundsException("\n
                index: $index, size: $size")\n
            }\n
        }\n
        internal fun\n
        checkRangeIndexes(fromIndex: Int, toIndex: Int, size: Int) {\n
            if (fromIndex < 0 || toIndex > size) {\n
                throw IndexOutOfBoundsException("\n
                fromIndex: $fromIndex, toIndex: $toIndex, size: $size")\n
            }\n
            if (fromIndex > toIndex) {\n
                throw IllegalArgumentException("\n
                fromIndex: $fromIndex > toIndex:\n
                $toIndex")\n
            }\n
        }\n
        internal fun checkBoundsIndexes(startIndex: Int, endIndex: Int, size: Int) {\n
            if (startIndex < 0 || endIndex > size) {\n
                throw IndexOutOfBoundsException("\n
                startIndex:\n
                $startIndex, endIndex: $endIndex, size: $size")\n
            }\n
            if (startIndex > endIndex) {\n
                throw\n
                IllegalArgumentException("\n
                startIndex: $startIndex > endIndex: $endIndex")\n
            }\n
        }\n
        internal\n
        fun orderedHashCode(c: Collection<*>): Int {\n
            var hashCode = 1\n
            for (e in c) {\n
                hashCode = 31 * hashCode + (e?.hashCode() ?: 0)\n
            }\n
            return hashCode\n
        }\n
        internal fun\n
        orderedEquals(c: Collection<*>, other: Collection<*>): Boolean {\n
            if (c.size != other.size) return false\n
            val otherIterator = other.iterator()\n
            for (elem in c) {\n
                val elemOther = otherIterator.next()\n
                if (elem != elemOther) {\n
                    return false\n
                }\n
            }\n
            return true\n
        }\n
    }\n
}\n
", /*\n
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 * Use of this\n
 * source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
 */\n
 * Based on GWT AbstractMap\n
 * Copyright 2007 Google Inc.\n
 */\n
package kotlin.collections\n
/**\n
 * Provides\n
 * a skeletal implementation of the read-only [Map] interface.\n
 * The implementor is required to implement\n
 * [entries] property, which should return read-only set of map entries.\n
 * @param K the type of map keys. The\n
 * map is invariant in its key type.\n
 * @param V the type of map values. The map is covariant in its value type.\n
 */\n
@SinceKotlin("1.1")\n
public abstract class AbstractMap<K, out V> protected constructor() : Map<K, V>\n
{\n
    override fun containsKey(key: K): Boolean {\n
        return implFindEntry(key) != null\n
    }\n
    override\n
    fun containsValue(value: @UnsafeVariance V): Boolean = entries.any { it.value == value }\n
    internal fun\n
    containsEntry(entry: Map.Entry<*, *>): Boolean {\n
        // since entry comes from @UnsafeVariance parameters it\n
        can be virtually anything\n
        if (entry !is Map.Entry<*, *>) return false\n
        val key = entry.key\n
        val value\n
        = entry.value\n
        val ourValue = get(key)\n
        if (value != ourValue) {\n
            return false\n
        }\n
        //\n
        Perhaps it was null and we don't contain the key?\n
        if (ourValue == null && !containsKey(key)) {\n
            return false\n
        }\n
        return true\n
    }\n
    /**\n
     * Compares this map with other instance with the\n
     ordered structural equality.\n
     * @return true, if [other] instance is a [Map] of the same size, all entries of\n
     which are contained in the [entries] set of this map.\n
     */\n
    override fun equals(other: Any?): Boolean {\n
        if\n
        (other === this) return true\n
        if (other !is Map<*, *>) return false\n
        if (size != other.size) return false\n
        return other.entries.all { containsEntry(it) }\n
    }\n
    override operator fun get(key: K): V? =\n
    implFindEntry(key)?.value\n
    /**\n
     * Returns the hash code value for this map.\n
     * It is the same as\n
     the hashCode of [entries] set.\n
     */\n
    override fun hashCode(): Int = entries.hashCode()\n
    override fun\n
    isEmpty(): Boolean = size == 0\n
    override val size: Int get() = entries.size\n
    /**\n
     * Returns a read-only\n
     [Set] of all keys in this map.\n
     * Accessing this property first time creates a keys view from [entries].\n
     * All subsequent accesses just return the created instance.\n
     */\n
    override val keys: Set<K>\n
    get() {\n
        if (_keys == null) {\n
            _keys = object : AbstractSet<K>() {\n
                override operator fun\n
                contains(element: K): Boolean = containsKey(element)\n
                override operator fun iterator(): Iterator<K>\n
                {\n
                    val entryIterator = entries.iterator()\n
                    return object : Iterator<K> {\n
                        override fun hasNext(): Boolean = entryIterator.hasNext()\n
                        override fun next(): K =\n
                        entryIterator.next().key\n
                    }\n
                }\n
            }\n
        }\n
        return _keys\n
    }\n
}

```

```

this@AbstractMap.size\n        }\n        }\n        return _keys!!\n        }\n\n    @kotlin.jvm.Volatile\n    private var _keys: Set<K>? = null\n\n    override fun toString(): String = entries.joinToString(", ", "\n", "\n") {  
    toString(it) }\n\n    private fun toString(entry: Map.Entry<K, V>): String = toString(entry.key) + "=" +  
    toString(entry.value)\n\n    private fun toString(o: Any?): String = if (o === this) "(this Map)" else o.toString()\n\n    /**\n     * Returns a read-only [Collection] of all values in this map.\n     * \n     * Accessing this property first time  
    creates a values view from [entries].\n     * \n     * All subsequent accesses just return the created instance.\n     * \n     *\n    override val values: Collection<V>\n        get() {\n            if (_values == null) {\n                _values = object :  
                AbstractCollection<V>() {\n                    override operator fun contains(element: @UnsafeVariance V): Boolean =  
                    containsValue(element)\n                }\n                override operator fun iterator(): Iterator<V> {\n                    val  
                    entryIterator = entries.iterator()\n                    return object : Iterator<V> {\n                        override fun  
                        hasNext(): Boolean = entryIterator.hasNext()\n                        override fun next(): V = entryIterator.next().value\n                    }\n                }\n            }\n            return _values!!\n        }\n\n    @kotlin.jvm.Volatile\n    private var _values: Collection<V>? = null\n\n    private fun implFindEntry(key: K): Map.Entry<K, V>? = entries.firstOrNull { it.key == key }\n\n    internal  
    companion object {\n        internal fun entryHashCode(e: Map.Entry<*, *>): Int = with(e) { (key?.hashCode() ?:  
        0) xor (value?.hashCode() ?: 0) }\n        internal fun entryToString(e: Map.Entry<*, *>): String = with(e) {  
        "$key=$value" }\n        internal fun entryEquals(e: Map.Entry<*, *>, other: Any?): Boolean {\n            if (other !is  
            Map.Entry<*, *>) return false\n            return e.key == other.key && e.value == other.value\n        }\n    }\n\n    }"/*\n     * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n     * Use of  
    this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n\n    */\npackage kotlin.collections\n\n/**\n     * Provides a skeletal implementation of the read-only [Set] interface.\n     * \n     * This class is intended to help implementing read-only sets so it doesn't support concurrent modification tracking.\n     * \n     * @param E the type of elements contained in the set. The set is covariant in its element type.\n     * \n     * @since Kotlin("1.1")\n    public abstract class AbstractSet<out E> protected constructor() :  
    AbstractCollection<E>(), Set<E> {\n        /**\n         * Compares this set with other set instance with the unordered  
        structural equality.\n         * \n         * @return true, if [other] instance is a [Set] of the same size, all elements of which are  
        contained in this set.\n         * \n         * override fun equals(other: Any?): Boolean {\n            if (other === this) return true\n            if (other !is Set<*>) return false\n            return setEquals(this, other)\n        }\n\n        /**\n         * Returns the hash code  
        value for this set.\n         * \n         * override fun hashCode(): Int = unorderedHashCode(this)\n\n        internal companion  
        object {\n            internal fun unorderedHashCode(c: Collection<*>): Int {\n                var hashCode = 0\n                for  
                (element in c) {\n                    hashCode += (element?.hashCode() ?: 0)\n                }\n                return hashCode\n            }\n\n            internal fun setEquals(c: Set<*>, other: Set<*>): Boolean {\n                if (c.size != other.size) return false\n                return c.containsAll(other)\n            }\n        }\n    }"/*\n     * Copyright 2010-2019 JetBrains s.r.o. and Kotlin  
    Programming Language contributors.\n     * Use of this source code is governed by the Apache 2.0 license that can be  
    found in the license/LICENSE.txt file.\n\n    */\npackage kotlin.collections\n\n/**\n     * Resizable-array implementation  
    of the deque data structure.\n     * \n     * The name deque is short for "double ended queue" and is usually pronounced  
    "deck".\n     * \n     * The collection provide methods for convenient access to the both ends.\n     * \n     * It also implements  
    [MutableList] interface and supports efficient get/set operations by index.\n\n    */\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic class ArrayDeque<E> :  
    AbstractMutableList<E> {\n    private var head: Int = 0\n    private var elementData: Array<Any?>\n\n    override  
    var size: Int = 0\n    private set\n\n    /**\n     * Constructs an empty deque with specified [initialCapacity], or  
    throws [IllegalArgumentException] if [initialCapacity] is negative.\n     * \n     * public constructor(initialCapacity:  
    Int) {\n        elementData = when {\n            initialCapacity == 0 -> emptyElementData\n            initialCapacity > 0 -  
            > arrayOfNulls(initialCapacity)\n            else -> throw IllegalArgumentException("Illegal Capacity:  
            $initialCapacity")\n        }\n    }\n\n    /**\n     * Constructs an empty deque.\n     * \n     * public constructor() {\n        elementData = emptyElementData\n    }\n\n    /**\n     * Constructs a deque that contains the same elements as the  
    specified [elements] collection in the same order.\n     * \n     * public constructor(elements: Collection<E>) {\n        elementData = elements.toArray()\n        size = elementData.size\n        if (elementData.isEmpty())

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elementData = emptyElementData\n    }\n\n    /**\n     * Ensures that the capacity of this deque is at least equal to
the specified [minCapacity].\n     *\n     * If the current capacity is less than the [minCapacity], a new backing
storage is allocated with greater capacity.\n     * Otherwise, this method takes no action and simply returns.\n     */\n    private fun ensureCapacity(minCapacity: Int) {\n        if (minCapacity < 0) throw IllegalStateException("Deque is
too big.") // overflow\n        if (minCapacity <= elementData.size) return\n        if (elementData ===
emptyElementData) {\n            elementData = arrayOfNulls(minCapacity.coerceAtLeast(defaultMinCapacity))\n            return\n        }\n        val newCapacity = newCapacity(elementData.size, minCapacity)\n        copyElements(newCapacity)\n    }\n\n    /**\n     * Creates a new array with the specified [newCapacity] size and
copies elements in the [elementData] array to it.\n     */\n    private fun copyElements(newCapacity: Int) {\n        val
newElements = arrayOfNulls<Any?>(newCapacity)\n        elementData.copyInto(newElements, 0, head,
elementData.size)\n        elementData.copyInto(newElements, elementData.size - head, 0, head)\n        head = 0\n        elementData = newElements\n    }\n\n    @kotlin.internal.InlineOnly\n    private inline fun
internalGet(internalIndex: Int): E {\n        @Suppress("UNCHECKED_CAST")\n        return
elementData[internalIndex] as E\n    }\n\n    private fun positiveMod(index: Int): Int = if (index >=
elementData.size) index - elementData.size else index\n\n    private fun negativeMod(index: Int): Int = if (index < 0)
index + elementData.size else index\n\n    @kotlin.internal.InlineOnly\n    private inline fun internalIndex(index:
Int): Int = positiveMod(head + index)\n\n    private fun incremented(index: Int): Int = if (index ==
elementData.lastIndex) 0 else index + 1\n\n    private fun decremented(index: Int): Int = if (index == 0)
elementData.lastIndex else index - 1\n\n    override fun isEmpty(): Boolean = size == 0\n\n    /**\n     * Returns the
first element, or throws [NoSuchElementException] if this deque is empty.\n     */\n    public fun first(): E = if
(isEmpty()) throw NoSuchElementException("ArrayDeque is empty.") else internalGet(head)\n\n    /**\n     *
Returns the first element, or `null` if this deque is empty.\n     */\n    public fun firstOrNull(): E? = if (isEmpty()) null
else internalGet(head)\n\n    /**\n     * Returns the last element, or throws [NoSuchElementException] if this deque
is empty.\n     */\n    public fun last(): E = if (isEmpty()) throw NoSuchElementException("ArrayDeque is empty.")
else internalGet(internalIndex(lastIndex))\n\n    /**\n     * Returns the last element, or `null` if this deque is empty.\n
     */\n    public fun lastOrNull(): E? = if (isEmpty()) null else internalGet(internalIndex(lastIndex))\n\n    /**\n     *
Prepends the specified [element] to this deque.\n     */\n    public fun addFirst(element: E) {\n        ensureCapacity(size + 1)\n        head = decremented(head)\n        elementData[head] = element\n        size += 1\n    }\n\n    /**\n     * Appends the specified [element] to this deque.\n     */\n    public fun addLast(element: E) {\n        ensureCapacity(size + 1)\n        elementData[internalIndex(size)] = element\n        size += 1\n    }\n\n    /**\n     *
Removes the first element from this deque and returns that removed element, or throws [NoSuchElementException]
if this deque is empty.\n     */\n    public fun removeFirst(): E {\n        if (isEmpty()) throw
NoSuchElementException("ArrayDeque is empty.")\n        val element = internalGet(head)\n        elementData[head] = null\n        head = incremented(head)\n        size -= 1\n        return element\n    }\n\n    /**\n     * Removes the first element from this deque and returns that removed element, or returns `null` if this deque is
empty.\n     */\n    public fun removeFirstOrNull(): E? = if (isEmpty()) null else removeFirst()\n\n    /**\n     *
Removes the last element from this deque and returns that removed element, or throws [NoSuchElementException]
if this deque is empty.\n     */\n    public fun removeLast(): E {\n        if (isEmpty()) throw
NoSuchElementException("ArrayDeque is empty.")\n        val internalLastIndex = internalIndex(lastIndex)\n        val element = internalGet(internalLastIndex)\n        elementData[internalLastIndex] = null\n        size -= 1\n        return element\n    }\n\n    /**\n     * Removes the last element from this deque and returns that removed element, or
returns `null` if this deque is empty.\n     */\n    public fun removeLastOrNull(): E? = if (isEmpty()) null else
removeLast()\n\n    // MutableList, MutableCollection\n    public override fun add(element: E): Boolean {\n        addLast(element)\n        return true\n    }\n\n    public override fun add(index: Int, element: E) {\n        AbstractList.checkPositionIndex(index, size)\n        if (index == size) {\n            addLast(element)\n            return\n        } else if (index == 0) {\n            addFirst(element)\n            return\n        }\n        ensureCapacity(size
+ 1)\n        // Elements in circular array lay in 2 ways:\n        // 1. `head` is less than `tail`:    [#, #, e1, e2, e3,
#]\n        // 2. `head` is greater than `tail`:    [e3, #, #, #, e1, e2]\n        // where head is the index of the first element

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in the circular array,\n    // and tail is the index following the last element.\n    //\n    // At this point the
insertion index is not equal to head or tail.\n    // Also the circular array can store at least one more element.\n
/>\n    // Depending on where the given element must be inserted the preceding or the succeeding\n    // elements
will be shifted to make room for the element to be inserted.\n    //\n    // In case the preceding elements are
shifted:\n    // * if the insertion index is greater than the head (regardless of circular array form)\n    // ->
shift the preceding elements\n    // * otherwise, the circular array has (2) form and the insertion index is less than
tail\n    // -> shift all elements in the back of the array\n    // -> shift preceding elements in the front of the
array\n    // In case the succeeding elements are shifted:\n    // * if the insertion index is less than the tail
(regardless of circular array form)\n    // -> shift the succeeding elements\n    // * otherwise, the circular
array has (2) form and the insertion index is greater than head\n    // -> shift all elements in the front of the
array\n    // -> shift succeeding elements in the back of the array\n\n    val internalIndex =
internalIndex(index)\n\n    if (index < (size + 1) shr 1) {\n        // closer to the first element -> shift preceding
elements\n        val decrementedInternalIndex = decremented(internalIndex)\n        val decrementedHead =
decremented(head)\n\n        if (decrementedInternalIndex >= head) {\n            elementData[decrementedHead]
= elementData[head] // head can be zero\n            elementData.copyInto(elementData, head, head + 1,
decrementedInternalIndex + 1)\n        } else { // head > tail\n            elementData.copyInto(elementData, head -
1, head, elementData.size) // head can't be zero\n            elementData[elementData.size - 1] = elementData[0]\n
            elementData.copyInto(elementData, 0, 1, decrementedInternalIndex + 1)\n        }\n\n        elementData[decrementedInternalIndex] = element\n        head = decrementedHead\n    } else {\n        //
closer to the last element -> shift succeeding elements\n        val tail = internalIndex(size)\n\n        if
(internalIndex < tail) {\n            elementData.copyInto(elementData, internalIndex + 1, internalIndex, tail)\n
        } else { // head > tail\n            elementData.copyInto(elementData, 1, 0, tail)\n            elementData[0] =
elementData[elementData.size - 1]\n            elementData.copyInto(elementData, internalIndex + 1, internalIndex,
elementData.size - 1)\n        }\n        elementData[internalIndex] = element\n    }\n    size += 1\n }\n\n private fun copyCollectionElements(internalIndex: Int, elements: Collection<E>) {\n    val iterator =
elements.iterator()\n    for (index in internalIndex until elementData.size) {\n        if (!iterator.hasNext())
break\n        elementData[index] = iterator.next()\n    }\n    for (index in 0 until head) {\n        if
(!iterator.hasNext()) break\n        elementData[index] = iterator.next()\n    }\n    size += elements.size\n }\n\n public override fun addAll(elements: Collection<E>): Boolean {\n    if (elements.isEmpty()) return false\n
    ensureCapacity(this.size + elements.size)\n    copyCollectionElements(internalIndex(size), elements)\n
return true\n }\n\n public override fun addAll(index: Int, elements: Collection<E>): Boolean {\n
AbstractList.checkPositionIndex(index, size)\n    if (elements.isEmpty()) {\n        return false\n    } else if
(index == size) {\n        return addAll(elements)\n    }\n    ensureCapacity(this.size + elements.size)\n    val tail = internalIndex(size)\n    val internalIndex = internalIndex(index)\n    val elementsSize =
elements.size\n\n    if (index < (size + 1) shr 1) {\n        // closer to the first element -> shift preceding
elements\n\n        var shiftedHead = head - elementsSize\n\n        if (internalIndex >= head) {\n            if
(shiftedHead >= 0) {\n                elementData.copyInto(elementData, shiftedHead, head, internalIndex)\n
            } else { // head < tail, insertion leads to head >= tail\n                shiftedHead += elementData.size\n                val
elementsToShift = internalIndex - head\n                val shiftToBack = elementData.size - shiftedHead\n\n                if (shiftToBack >= elementsToShift) {\n                    elementData.copyInto(elementData, shiftedHead, head,
internalIndex)\n                } else {\n                    elementData.copyInto(elementData, shiftedHead, head, head +
shiftToBack)\n                    elementData.copyInto(elementData, 0, head + shiftToBack, internalIndex)\n                }\n            }\n        } else { // head > tail, internalIndex < tail\n            elementData.copyInto(elementData,
shiftedHead, head, elementData.size)\n            if (elementsSize >= internalIndex) {\n                elementData.copyInto(elementData, elementData.size - elementsSize, 0, internalIndex)\n            } else {\n                elementData.copyInto(elementData, elementData.size - elementsSize, 0, elementsSize)\n
            }\n            elementData.copyInto(elementData, 0, elementsSize, internalIndex)\n        }\n        head =
shiftedHead\n        copyCollectionElements(negativeMod(internalIndex - elementsSize), elements)\n    } else

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{\n      // closer to the last element -> shift succeeding elements\n\n      val shiftedInternalIndex =
internalIndex + elementsSize\n\n      if (internalIndex < tail) {\n      if (tail + elementsSize <=
elementData.size) {\n      elementData.copyInto(elementData, shiftedInternalIndex, internalIndex, tail)\n
      } else { // head < tail, insertion leads to head >= tail\n      if (shiftedInternalIndex >= elementData.size)\n
{\n      elementData.copyInto(elementData, shiftedInternalIndex - elementData.size, internalIndex, tail)\n
      } else {\n      val shiftToFront = tail + elementsSize - elementData.size\n
elementData.copyInto(elementData, 0, tail - shiftToFront, tail)\n      elementData.copyInto(elementData,
shiftedInternalIndex, internalIndex, tail - shiftToFront)\n      }\n      }\n      } else { // head > tail,
internalIndex > head\n      elementData.copyInto(elementData, elementsSize, 0, tail)\n      if
(shiftedInternalIndex >= elementData.size) {\n      elementData.copyInto(elementData, shiftedInternalIndex
- elementData.size, internalIndex, elementData.size)\n      } else {\n
elementData.copyInto(elementData, 0, elementData.size - elementsSize, elementData.size)\n
elementData.copyInto(elementData, shiftedInternalIndex, internalIndex, elementData.size - elementsSize)\n
}\n      }\n      copyCollectionElements(internalIndex, elements)\n      }\n\n      return true\n      }\n\n      public
override fun get(index: Int): E {\n      AbstractList.checkElementIndex(index, size)\n\n      return
internalGet(internalIndex(index))\n      }\n\n      public override fun set(index: Int, element: E): E {\n
AbstractList.checkElementIndex(index, size)\n\n      val internalIndex = internalIndex(index)\n      val oldElement
= internalGet(internalIndex)\n      elementData[internalIndex] = element\n\n      return oldElement\n      }\n\n
public override fun contains(element: E): Boolean = indexOf(element) != -1\n\n      public override fun
indexOf(element: E): Int {\n      val tail = internalIndex(size)\n\n      if (head < tail) {\n      for (index in head
until tail) {\n      if (element == elementData[index]) return index - head\n      }\n      } else if (head >=
tail) {\n      for (index in head until elementData.size) {\n      if (element == elementData[index]) return
index - head\n      }\n      for (index in 0 until tail) {\n      if (element == elementData[index]) return
index + elementData.size - head\n      }\n      }\n\n      return -1\n      }\n\n      public override fun
lastIndexOf(element: E): Int {\n      val tail = internalIndex(size)\n\n      if (head < tail) {\n      for (index in tail
- 1 downTo head) {\n      if (element == elementData[index]) return index - head\n      }\n      } else if
(head > tail) {\n      for (index in tail - 1 downTo 0) {\n      if (element == elementData[index]) return
index + elementData.size - head\n      }\n      for (index in elementData.lastIndex downTo head) {\n
if (element == elementData[index]) return index - head\n      }\n      }\n\n      return -1\n      }\n\n      public
override fun remove(element: E): Boolean {\n      val index = indexOf(element)\n      if (index == -1) return
false\n      removeAt(index)\n      return true\n      }\n\n      public override fun removeAt(index: Int): E {\n
AbstractList.checkElementIndex(index, size)\n      if (index == lastIndex) {\n      return removeLast()\n      }
else if (index == 0) {\n      return removeFirst()\n      }\n\n      val internalIndex = internalIndex(index)\n
val element = internalGet(internalIndex)\n\n      if (index < size shr 1) {\n      // closer to the first element ->
shift preceding elements\n      if (internalIndex >= head) {\n      elementData.copyInto(elementData, head
+ 1, head, internalIndex)\n      } else { // head > tail, internalIndex < head\n
elementData.copyInto(elementData, 1, 0, internalIndex)\n      elementData[0] = elementData[elementData.size
- 1]\n      elementData.copyInto(elementData, head + 1, head, elementData.size - 1)\n      }\n\n      elementData[head] = null\n      head = incremented(head)\n      } else {\n      // closer to the last element ->
shift succeeding elements\n      val internalLastIndex = internalIndex(lastIndex)\n\n      if (internalIndex <=
internalLastIndex) {\n      elementData.copyInto(elementData, internalIndex, internalIndex + 1,
internalLastIndex + 1)\n      } else { // head > tail, internalIndex > head\n
elementData.copyInto(elementData, internalIndex, internalIndex + 1, elementData.size)\n
elementData[elementData.size - 1] = elementData[0]\n      elementData.copyInto(elementData, 0, 1,
internalLastIndex + 1)\n      }\n\n      elementData[internalLastIndex] = null\n      }\n      size -= 1\n\n
return element\n      }\n\n      public override fun removeAll(elements: Collection<E>): Boolean = filterInPlace {
!elements.contains(it) }\n\n      public override fun retainAll(elements: Collection<E>): Boolean = filterInPlace {
elements.contains(it) }\n\n      private inline fun filterInPlace(predicate: (E) -> Boolean): Boolean {\n      if

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(this.isEmpty() || elementData.isEmpty())\n        return false\n\n        val tail = internalIndex(size)\n        var\n        newTail = head\n        var modified = false\n        if (head < tail) {\n            for (index in head until tail) {\n                val element = elementData[index]\n                @Suppress(\"UNCHECKED_CAST\")\n                if\n                (predicate(element as E))\n                    elementData[newTail++] = element\n                    else\n                        modified =\n                        true\n            }\n            elementData.fill(null, newTail, tail)\n        } else {\n            for (index in head until\n            elementData.size) {\n                val element = elementData[index]\n                elementData[index] = null\n                @Suppress(\"UNCHECKED_CAST\")\n                if (predicate(element as E))\n                    elementData[newTail++] = element\n                    else\n                        modified = true\n            }\n            newTail =\n            positiveMod(newTail)\n            for (index in 0 until tail) {\n                val element = elementData[index]\n                elementData[index] = null\n                @Suppress(\"UNCHECKED_CAST\")\n                if (predicate(element as\n                E)) {\n                    elementData[newTail] = element\n                    newTail = incremented(newTail)\n                }\n                else {\n                    modified = true\n                }\n            }\n            if (modified)\n                size =\n                negativeMod(newTail - head)\n            return modified\n        }\n\n        public override fun clear() {\n            val tail =\n            internalIndex(size)\n            if (head < tail) {\n                elementData.fill(null, head, tail)\n            } else if (isNotEmpty())\n                {\n                    elementData.fill(null, head, elementData.size)\n                    elementData.fill(null, 0, tail)\n                }\n            head =\n            0\n            size = 0\n        }\n\n        @Suppress(\"NOTHING_TO_OVERRIDE\")\n        override fun <T> toArray(array:\n        Array<T>): Array<T> {\n            @Suppress(\"UNCHECKED_CAST\")\n            val dest = (if (array.size >= size) array\n            else arrayOfNulls(array, size)) as Array<Any?>\n            val tail = internalIndex(size)\n            if (head < tail) {\n                elementData.copyInto(dest, startIndex = head, endIndex = tail)\n            } else if (isNotEmpty()) {\n                elementData.copyInto(dest, destinationOffset = 0, startIndex = head, endIndex = elementData.size)\n                elementData.copyInto(dest, destinationOffset = elementData.size - head, startIndex = 0, endIndex = tail)\n            }\n            if (dest.size > size) {\n                dest[size] = null // null-terminate\n            }\n            @Suppress(\"UNCHECKED_CAST\")\n            return dest as Array<T>\n        }\n\n        @Suppress(\"NOTHING_TO_OVERRIDE\")\n        override fun toArray(): Array<Any?> {\n            return\n            toArray(arrayOfNulls<Any?>(size))\n        }\n\n        // for testing\n        internal fun <T> testToArray(array: Array<T>):\n        Array<T> = toArray(array)\n        internal fun testToArray(): Array<Any?> = toArray()\n\n        internal companion\n        object {\n            private val emptyElementData = emptyArray<Any?>()\n            private const val maxArraySize =\n            Int.MAX_VALUE - 8\n            private const val defaultMinCapacity = 10\n            internal fun\n            newCapacity(oldCapacity: Int, minCapacity: Int): Int {\n                // overflow-conscious\n                var newCapacity =\n                oldCapacity + (oldCapacity shr 1)\n                if (newCapacity - minCapacity < 0)\n                    newCapacity =\n                    minCapacity\n                if (newCapacity - maxArraySize > 0)\n                    newCapacity = if (minCapacity >\n                    maxArraySize) Int.MAX_VALUE else maxArraySize\n                return newCapacity\n            }\n        }\n\n        // For testing\n        only\n        internal fun internalStructure(structure: (head: Int, elements: Array<Any?>) -> Unit) {\n            val tail =\n            internalIndex(size)\n            val head = if (isEmpty() || head < tail) head else head - elementData.size\n            structure(head, toArray())\n        }\n\n        /*\n        * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language\n        contributors.\n        * Use of this source code is governed by the Apache 2.0 license that can be found in the\n        license/LICENSE.txt file.\n        */\n\n        @file:kotlin.jvm.JvmMultifileClass\n        @file:kotlin.jvm.JvmName(\"ArraysKt\")\n\n        package\n        kotlin.collections\n        \n        import kotlin.contracts.*\n\n        /**\n        * Returns a single list of all elements from all arrays in the\n        given array.\n        * @sample samples.collections.Arrays.Transformations.flattenArray\n        */\n        public fun <T> Array<out\n        Array<out T>>.flatten(): List<T> {\n            val result = ArrayList<T>(sumOf { it.size })\n            for (element in this) {\n                result.addAll(element)\n            }\n            return result\n        }\n\n        /**\n        * Returns a pair of lists, where\n        * *first* list is built from\n        the first values of each pair from this array,\n        * *second* list is built from the second values of each pair from this\n        array.\n        * @sample samples.collections.Arrays.Transformations.unzipArray\n        */\n        public fun <T, R> Array<out\n        Pair<T, R>>.unzip(): Pair<List<T>, List<R>> {\n            val listT = ArrayList<T>(size)\n            val listR =\n            ArrayList<R>(size)\n            for (pair in this) {\n                listT.add(pair.first)\n                listR.add(pair.second)\n            }\n            return\n            listT to listR\n        }\n\n        /**\n        * Returns `true` if this nullable array is either null or empty.\n        * @sample\n        samples.collections.Arrays.Usage.arrayIsNullOrEmpty\n        */\n    
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*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\npublic inline fun Array<*>?.isEmpty(): Boolean
{\n contract {\n returns(false) implies (this@isEmpty != null)\n }\n return this == null ||
this.isEmpty()\n}\n\n**\n * Returns this array if it's not empty\n * or the result of calling [defaultValue] function if
the array is empty.\n *\n * @sample samples.collections.Arrays.Usage.arrayIfEmpty\n
*\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Suppress("UPPER_BOUND_CANNOT_BE_ARRAY\
")\npublic inline fun <C, R> C.isEmpty(defaultValue: () -> R): R where C : Array<*>, C : R =\n if (isEmpty())
defaultValue() else
this\n\n\n@OptIn(ExperimentalUnsignedTypes::class)\n@SinceKotlin("1.3")\n@PublishedApi\n@kotlin.jvm.Jvm
Name("contentDeepEquals")\n@kotlin.js.JsName("contentDeepEqualsImpl")\ninternal fun <T> Array<out
T>?.contentDeepEqualsImpl(other: Array<out T>?): Boolean {\n if (this === other) return true\n if (this == null
|| other == null || this.size != other.size) return false\n for (i in indices) {\n val v1 = this[i]\n val v2 =
other[i]\n if (v1 === v2) {\n continue\n } else if (v1 == null || v2 == null) {\n return false\n
}\n\n when {\n v1 is Array<*> && v2 is Array<*> -> if (!v1.contentDeepEquals(v2)) return
false\n v1 is ByteArray && v2 is ByteArray -> if (!v1.contentEquals(v2)) return false\n v1 is
ShortArray && v2 is ShortArray -> if (!v1.contentEquals(v2)) return false\n v1 is IntArray && v2 is
IntArray -> if (!v1.contentEquals(v2)) return false\n v1 is LongArray && v2 is LongArray -> if
(!v1.contentEquals(v2)) return false\n v1 is FloatArray && v2 is FloatArray -> if (!v1.contentEquals(v2))
return false\n v1 is DoubleArray && v2 is DoubleArray -> if (!v1.contentEquals(v2)) return false\n
v1 is CharArray && v2 is CharArray -> if (!v1.contentEquals(v2)) return false\n v1 is BooleanArray &&
v2 is BooleanArray -> if (!v1.contentEquals(v2)) return false\n v1 is UByteArray && v2 is UByteArray
-> if (!v1.contentEquals(v2)) return false\n v1 is UShortArray && v2 is UShortArray -> if
(!v1.contentEquals(v2)) return false\n v1 is UIntArray && v2 is UIntArray -> if (!v1.contentEquals(v2))
return false\n v1 is ULongArray && v2 is ULongArray -> if (!v1.contentEquals(v2)) return false\n
else -> if (v1 != v2) return false\n }\n\n }\n return
true\n}\n\n\n@SinceKotlin("1.3")\n@PublishedApi\n@kotlin.jvm.JvmName("contentDeepToString")\n@kotlin.js.
JsName("contentDeepToStringImpl")\ninternal fun <T> Array<out T>?.contentDeepToStringImpl(): String {\n
if (this == null) return "null"\n val length = size.coerceAtMost((Int.MAX_VALUE - 2) / 5) * 5 + 2 // in order not
to overflow Int.MAX_VALUE\n return buildString(length) {\n contentDeepToStringInternal(this,
mutableListOf())\n }\n}\n\n@OptIn(ExperimentalUnsignedTypes::class)\nprivate fun <T> Array<out
T>.contentDeepToStringInternal(result: StringBuilder, processed: MutableList<Array<*>>) {\n if (this in
processed) {\n result.append("[...]")\n return\n }\n processed.add(this)\n result.append('[')\n for (i
in indices) {\n if (i != 0) {\n result.append(", ")\n }\n val element = this[i]\n when
(element) {\n null -> result.append("null")\n is Array<*> ->
element.contentDeepToStringInternal(result, processed)\n is ByteArray ->
result.append(element.contentToString())\n is ShortArray -> result.append(element.contentToString())\n
is IntArray -> result.append(element.contentToString())\n is LongArray ->
result.append(element.contentToString())\n is FloatArray -> result.append(element.contentToString())\n
is DoubleArray -> result.append(element.contentToString())\n is CharArray ->
result.append(element.contentToString())\n is BooleanArray -> result.append(element.contentToString())\n
is UByteArray -> result.append(element.contentToString())\n is UShortArray ->
result.append(element.contentToString())\n is UIntArray -> result.append(element.contentToString())\n
is ULongArray -> result.append(element.contentToString())\n else ->
result.append(element.toString())\n }\n }\n\n result.append('']\n
processed.removeAt(processed.lastIndex)\n}"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n *\n\npackage kotlin.collections\n\n**\n * Returns true if the brittle contains optimization
is enabled. See KT-45438. *\n\ninternal expect fun brittleContainsOptimizationEnabled(): Boolean\n\n**\n *
Returns true if [brittleContainsOptimizationEnabled] is true\n * and it's safe to convert this collection to a set

```

```

without changing contains method behavior.
private fun <T> Collection<T>.safeToConvertToSet() =
brittleContainsOptimizationEnabled() && size > 2 && this is ArrayList
When
[brittleContainsOptimizationEnabled] is true:
- Converts this [Iterable] to a set if it is not a [Collection].
- Converts this [Collection] to a set, when it's worth so and it doesn't change contains method behavior.
- Otherwise returns this.
When [brittleContainsOptimizationEnabled] is false:
- Converts this [Iterable] to a list if it is not a [Collection].
- Otherwise returns this.
internal fun <T>
Iterable<T>.convertToSetForSetOperationWith(source: Iterable<T>): Collection<T> =
when (this) {
is Set -> this
is Collection ->
when {
source is Collection && source.size < 2 -> this
else -> if (this.safeToConvertToSet()) toHashSet() else this
}
else -> if
(brittleContainsOptimizationEnabled()) toHashSet() else toList()
}
When
[brittleContainsOptimizationEnabled] is true:
- Converts this [Iterable] to a set if it is not a [Collection].
- Converts this [Collection] to a set, when it's worth so and it doesn't change contains method behavior.
- Otherwise returns this.
When [brittleContainsOptimizationEnabled] is false:
- Converts this [Iterable] to a list if it is not a [Collection].
- Otherwise returns this.
internal fun <T>
Iterable<T>.convertToSetForSetOperation(): Collection<T> =
when (this) {
is Set -> this
is Collection -> if (this.safeToConvertToSet()) toHashSet() else this
else -> if
(brittleContainsOptimizationEnabled()) toHashSet() else toList()
}
Converts this sequence to a set if
[brittleContainsOptimizationEnabled] is true,
otherwise converts it to a list.
internal fun <T>
Sequence<T>.convertToSetForSetOperation(): Collection<T> =
if (brittleContainsOptimizationEnabled())
toHashSet() else toList()
Converts this array to a set if [brittleContainsOptimizationEnabled] is true,
otherwise converts it to a list.
internal fun <T>
Array<T>.convertToSetForSetOperation(): Collection<T> =
if (brittleContainsOptimizationEnabled()) toHashSet() else asList()
/*
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and Kotlin Programming Language contributors.
Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.
*/
package kotlin.collections
Data class
representing a value from a collection or sequence, along with its index in that collection or sequence.
@property value the underlying value.
@property index the index of the value in the collection or sequence.
public data class IndexedValue<out T>(public val index: Int, public val value: T)
/*
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Apache 2.0 license that can be found in the license/LICENSE.txt file.
*/
@file:kotlin.jvm.JvmName("MapAccessorsKt")
package kotlin.collections
import
kotlin.reflect.KProperty
import kotlin.internal.Exact
/*
Returns the value of the property for the given
object from this read-only map.
@param thisRef the object for which the value is requested (not used).
@param property the metadata for the property, used to get the name of property and lookup the value
corresponding to this name in the map.
@return the property value.
@throws NoSuchElementException
when the map doesn't contain value for the property name and doesn't provide an implicit default (see
[withDefault]).
*/
@kotlin.internal.InlineOnly
public inline operator fun <V, V1 : V> Map<in String, @Exact
V>.getValue(thisRef: Any?, property: KProperty<*>): V1 =
@Suppress("UNCHECKED_CAST")
(getOrImplicitDefault(property.name) as V1)
/*
Returns the value of the property for the given object from
this mutable map.
@param thisRef the object for which the value is requested (not used).
@param property the metadata for the property, used to get the name of property and lookup the value corresponding to this name in
the map.
@return the property value.
@throws NoSuchElementException when the map doesn't contain
value for the property name and doesn't provide an implicit default (see [withDefault]).
*/
@kotlin.jvm.JvmName("getVar")
@kotlin.internal.InlineOnly
public inline operator fun <V, V1 : V>
MutableMap<in String, out @Exact V>.getValue(thisRef: Any?, property: KProperty<*>): V1 =
@Suppress("UNCHECKED_CAST")
(getOrImplicitDefault(property.name) as V1)
/*
Stores the value of
the property for the given object in this mutable map.
@param thisRef the object for which the value is
requested (not used).
@param property the metadata for the property, used to get the name of property and store
the value associated with that name in the map.
@param value the value to set.
*/

```

```

*\/n@kotlin.internal.InlineOnly\npublic inline operator fun <V> MutableMap<in String, in V>.setValue(thisRef:
Any?, property: KProperty<*>, value: V) {\n    this.put(property.name, value)\n}\n"/n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\/n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("\MapsKt")\n\npackage
kotlin.collections\n\n/**\n * Returns the value for the given key, or the implicit default value for this map.\n * By
default no implicit value is provided for maps and a [NoSuchElementException] is thrown.\n * To create a map with
implicit default value use [withDefault] method.\n * \n * @throws NoSuchElementException when the map doesn't
contain a value for the specified key and no implicit default was provided for that map.\n
*\/n@kotlin.jvm.JvmName("\getOrImplicitDefaultNullable")\n@PublishedApi\ninternal fun <K, V> Map<K,
V>.getOrImplicitDefault(key: K): V {\n    if (this is MapWithDefault)\n        return
this.getOrImplicitDefault(key)\n    return getOrElseNullable(key, { throw NoSuchElementException("Key $key
is missing in the map.") })\n}\n\n/**\n * Returns a wrapper of this read-only map, having the implicit default value
provided with the specified function [defaultValue].\n * \n * This implicit default value is used when the original
map doesn't contain a value for the key specified\n * and a value is obtained with [Map.getValue] function, for
example when properties are delegated to the map.\n * \n * When this map already has an implicit default value
provided with a former call to [withDefault], it is being replaced by this call.\n *\/n\npublic fun <K, V> Map<K,
V>.withDefault(defaultValue: (key: K) -> V): Map<K, V> =\n    when (this) {\n        is MapWithDefault ->
this.map.withDefault(defaultValue)\n        else -> MapWithDefaultImpl(this, defaultValue)\n    }\n\n/**\n * Returns
a wrapper of this mutable map, having the implicit default value provided with the specified function
[defaultValue].\n * \n * This implicit default value is used when the original map doesn't contain a value for the key
specified\n * and a value is obtained with [Map.getValue] function, for example when properties are delegated to the
map.\n * \n * When this map already has an implicit default value provided with a former call to [withDefault], it is
being replaced by this call.\n *\/n\n@kotlin.jvm.JvmName("\withDefaultMutable")\npublic fun <K, V>
MutableMap<K, V>.withDefault(defaultValue: (key: K) -> V): MutableMap<K, V> =\n    when (this) {\n        is
MutableMapWithDefault -> this.map.withDefault(defaultValue)\n        else -> MutableMapWithDefaultImpl(this,
defaultValue)\n    }\n\nprivate interface MapWithDefault<K, out V> : Map<K, V> {\n    public val map: Map<K,
V>\n    public fun getOrImplicitDefault(key: K): V\n}\n\nprivate interface MutableMapWithDefault<K, V> :
MutableMap<K, V>, MapWithDefault<K, V> {\n    public override val map: MutableMap<K, V>\n}\n\nprivate
class MapWithDefaultImpl<K, out V>(public override val map: Map<K, V>, private val default: (key: K) -> V) :
MapWithDefault<K, V> {\n    override fun equals(other: Any?): Boolean = map.equals(other)\n    override fun
hashCode(): Int = map.hashCode()\n    override fun toString(): String = map.toString()\n    override val size: Int get()
= map.size\n    override fun isEmpty(): Boolean = map.isEmpty()\n    override fun containsKey(key: K): Boolean =
map.containsKey(key)\n    override fun containsValue(value: @UnsafeVariance V): Boolean =
map.containsValue(value)\n    override fun get(key: K): V? = map.get(key)\n    override val keys: Set<K> get() =
map.keys\n    override val values: Collection<V> get() = map.values\n    override val entries: Set<Map.Entry<K,
V>> get() = map.entries\n    override fun getOrImplicitDefault(key: K): V = map.getOrElseNullable(key, {
default(key) })\n}\n\nprivate class MutableMapWithDefaultImpl<K, V>(public override val map: MutableMap<K,
V>, private val default: (key: K) -> V) : MutableMapWithDefault<K, V> {\n    override fun equals(other: Any?):
Boolean = map.equals(other)\n    override fun hashCode(): Int = map.hashCode()\n    override fun toString(): String
= map.toString()\n    override val size: Int get() = map.size\n    override fun isEmpty(): Boolean = map.isEmpty()\n
override fun containsKey(key: K): Boolean = map.containsKey(key)\n    override fun containsValue(value:
@UnsafeVariance V): Boolean = map.containsValue(value)\n    override fun get(key: K): V? = map.get(key)\n
override val keys: MutableSet<K> get() = map.keys\n    override val values: MutableCollection<V> get() =
map.values\n    override val entries: MutableSet<MutableMap.MutableEntry<K, V>> get() = map.entries\n\n
override fun put(key: K, value: V): V? = map.put(key, value)\n    override fun remove(key: K): V? =
map.remove(key)\n    override fun putAll(from: Map<out K, V>) = map.putAll(from)\n    override fun clear() =
map.clear()\n}\n\n    override fun getOrImplicitDefault(key: K): V = map.getOrElseNullable(key, { default(key)

```

```

})\n}\n\n", "/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("CollectionsKt")\n\npackage
kotlin.collections\n\nimport kotlin.random.Random\n\n/**\n * Removes a single instance of the specified element
from this\n * collection, if it is present.\n * \n * Allows to overcome type-safety restriction of `remove` that requires
to pass an element of type `E`.\n * \n * @return `true` if the element has been successfully removed; `false` if it was
not present in the collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline fun <@kotlin.internal.OnlyInputTypes
T> MutableCollection<out T>.remove(element: T): Boolean =\n    @Suppress("UNCHECKED_CAST") (this as
MutableCollection<T>).remove(element)\n\n/**\n * Removes all of this collection's elements that are also
contained in the specified collection.\n * \n * Allows to overcome type-safety restriction of `removeAll` that requires
to pass a collection of type `Collection<E>`.\n * \n * @return `true` if any of the specified elements was removed
from the collection, `false` if the collection was not modified.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline fun
<@kotlin.internal.OnlyInputTypes T> MutableCollection<out T>.removeAll(elements: Collection<T>): Boolean
=\n    @Suppress("UNCHECKED_CAST") (this as MutableCollection<T>).removeAll(elements)\n\n/**\n *
Retains only the elements in this collection that are contained in the specified collection.\n * \n * Allows to
overcome type-safety restriction of `retainAll` that requires to pass a collection of type `Collection<E>`.\n * \n *
@return `true` if any element was removed from the collection, `false` if the collection was not modified.\n *
*\n\n@kotlin.internal.InlineOnly\n\npublic inline fun <@kotlin.internal.OnlyInputTypes T> MutableCollection<out
T>.retainAll(elements: Collection<T>): Boolean =\n    @Suppress("UNCHECKED_CAST") (this as
MutableCollection<T>).retainAll(elements)\n\n/**\n * Adds the specified [element] to this mutable collection.\n *
*\n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T> MutableCollection<in T>.plusAssign(element: T)
{\n    this.add(element)\n}\n\n/**\n * Adds all elements of the given [elements] collection to this mutable
collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T> MutableCollection<in
T>.plusAssign(elements: Iterable<T>) {\n    this.addAll(elements)\n}\n\n/**\n * Adds all elements of the given
[elements] array to this mutable collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T>
MutableCollection<in T>.plusAssign(elements: Array<T>) {\n    this.addAll(elements)\n}\n\n/**\n * Adds all
elements of the given [elements] sequence to this mutable collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic
inline operator fun <T> MutableCollection<in T>.plusAssign(elements: Sequence<T>) {\n
    this.addAll(elements)\n}\n\n/**\n * Removes a single instance of the specified [element] from this mutable
collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T> MutableCollection<in
T>.minusAssign(element: T) {\n    this.remove(element)\n}\n\n/**\n * Removes all elements contained in the given
[elements] collection from this mutable collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun
<T> MutableCollection<in T>.minusAssign(elements: Iterable<T>) {\n    this.removeAll(elements)\n}\n\n/**\n *
Removes all elements contained in the given [elements] array from this mutable collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T> MutableCollection<in T>.minusAssign(elements:
Array<T>) {\n    this.removeAll(elements)\n}\n\n/**\n * Removes all elements contained in the given [elements]
sequence from this mutable collection.\n * \n\n@kotlin.internal.InlineOnly\n\npublic inline operator fun <T>
MutableCollection<in T>.minusAssign(elements: Sequence<T>) {\n    this.removeAll(elements)\n}\n\n/**\n * Adds
all elements of the given [elements] collection to this [MutableCollection].\n * \n\npublic fun <T>
MutableCollection<in T>.addAll(elements: Iterable<T>): Boolean {\n    when (elements) {\n        is Collection ->
return addAll(elements)\n        else -> {\n            var result: Boolean = false\n            for (item in elements)\n                if (add(item)) result = true\n            return result\n        }\n    }\n}\n\n/**\n * Adds all elements of the given
[elements] sequence to this [MutableCollection].\n * \n\npublic fun <T> MutableCollection<in T>.addAll(elements:
Sequence<T>): Boolean {\n    var result: Boolean = false\n    for (item in elements) {\n        if (add(item)) result =
true\n    }\n    return result\n}\n\n/**\n * Adds all elements of the given [elements] array to this
[MutableCollection].\n * \n\npublic fun <T> MutableCollection<in T>.addAll(elements: Array<out T>): Boolean {\n
return addAll(elements.asList())\n}\n\n/**\n * Removes all elements from this [MutableCollection] that are also
contained in the given [elements] collection.\n * \n\npublic fun <T> MutableCollection<in T>.removeAll(elements:

```

```

Iterable<T>): Boolean {
    return removeAll(elements.convertToSetForSetOperationWith(this))
}

* Removes all elements from this [MutableCollection] that are also contained in the given [elements] sequence.

*
public fun <T> MutableCollection<in T>.removeAll(elements: Sequence<T>): Boolean {
    val set = elements.convertToSetForSetOperation()
    return set.isNotEmpty() && removeAll(set)
}

* Removes all elements from this [MutableCollection] that are also contained in the given [elements] array.

*
public fun <T> MutableCollection<in T>.removeAll(elements: Array<out T>): Boolean {
    return elements.isNotEmpty() && removeAll(elements.convertToSetForSetOperation())
}

* Retains only elements of this [MutableCollection] that are contained in the given [elements] collection.

*
public fun <T> MutableCollection<in T>.retainAll(elements: Iterable<T>): Boolean {
    return retainAll(elements.convertToSetForSetOperationWith(this))
}

* Retains only elements of this [MutableCollection] that are contained in the given [elements] array.

*
public fun <T> MutableCollection<in T>.retainAll(elements: Array<out T>): Boolean {
    if (elements.isNotEmpty())
        return retainAll(elements.convertToSetForSetOperation())
    else
        return retainNothing()
}

* Retains only elements of this [MutableCollection] that are contained in the given [elements] sequence.

*
public fun <T> MutableCollection<in T>.retainAll(elements: Sequence<T>): Boolean {
    val set = elements.convertToSetForSetOperation()
    if (set.isNotEmpty())
        return retainAll(set)
    else
        return retainNothing()
}

private fun MutableCollection<*>.retainNothing(): Boolean {
    val result = isEmpty()
    clear()
    return result
}

* Removes all elements from this [MutableIterable] that match the given [predicate].

*
* @return `true` if any element was removed from this collection, or `false` when no elements were removed and collection was not modified.

*
public fun <T> MutableIterable<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, true)

* Retains only elements of this [MutableIterable] that match the given [predicate].

*
* @return `true` if any element was removed from this collection, or `false` when all elements were retained and collection was not modified.

*
public fun <T> MutableIterable<T>.retainAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate, false)

private fun <T> MutableIterable<T>.filterInPlace(predicate: (T) -> Boolean, predicateResultToRemove: Boolean): Boolean {
    var result = false
    with(iterator()) {
        while (hasNext())
            if (predicate(next()) == predicateResultToRemove)
                remove()
                result = true
    }
    return result
}

* Removes the element at the specified [index] from this list.

* In Kotlin one should use the [MutableList.removeAt] function instead.

*
@Deprecated("Use removeAt(index) instead.", ReplaceWith("removeAt(index)"), level = DeprecationLevel.ERROR)
@kotlin.internal.InlineOnly
public inline fun <T> MutableList<T>.remove(index: Int): T = removeAt(index)

* Removes the first element from this mutable list and returns that removed element, or throws [NoSuchElementException] if this list is empty.

*
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeFirst(): T = if (isEmpty()) throw NoSuchElementException("List is empty.") else removeAt(0)

* Removes the first element from this mutable list and returns that removed element, or returns `null` if this list is empty.

*
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeFirstOrNull(): T? = if (isEmpty()) null else removeAt(0)

* Removes the last element from this mutable list and returns that removed element, or throws [NoSuchElementException] if this list is empty.

*
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeLast(): T = if (isEmpty()) throw NoSuchElementException("List is empty.") else removeAt(lastIndex)

* Removes the last element from this mutable list and returns that removed element, or returns `null` if this list is empty.

*
@SinceKotlin("1.4")
@WasExperimental(ExperimentalStdlibApi::class)
public fun <T> MutableList<T>.removeLastOrNull(): T? = if (isEmpty()) null else removeAt(lastIndex)

* Removes all elements from this [MutableList] that match the given [predicate].

*
* @return `true` if any element was removed from this collection, or `false` when no elements were removed and collection was not modified.

*
public fun <T> MutableList<T>.removeAll(predicate: (T) -> Boolean): Boolean = filterInPlace(predicate,

```

```

true)\n\n/**\n * Retains only elements of this [MutableList] that match the given [predicate].\n *\n * @return `true` if any element was removed from this collection, or `false` when all elements were retained and collection was not modified.\n */\npublic fun <T> MutableList<T>.retainAll(predicate: (T) -> Boolean): Boolean =
filterInPlace(predicate, false)\n\nprivate fun <T> MutableList<T>.filterInPlace(predicate: (T) -> Boolean,
predicateResultToRemove: Boolean): Boolean {\n    if (this !is RandomAccess)\n        return (this as
MutableIterable<T>).filterInPlace(predicate, predicateResultToRemove)\n\n    var writeIndex: Int = 0\n    for
(readIndex in 0..lastIndex) {\n        val element = this[readIndex]\n        if (predicate(element) ==
predicateResultToRemove)\n            continue\n\n        if (writeIndex != readIndex)\n            this[writeIndex] =
element\n\n        writeIndex++\n    }\n    if (writeIndex < size) {\n        for (removeIndex in lastIndex downTo
writeIndex)\n            removeAt(removeIndex)\n\n        return true\n    } else {\n        return false\n    }\n}\n\n"/**\n *
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governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("CollectionsKt")\n\npackage
kotlin.collections\n\nprivate open class ReversedListReadOnly<out T>(private val delegate: List<T>) :
AbstractList<T>() {\n    override val size: Int get() = delegate.size\n    override fun get(index: Int): T =
delegate[reverseElementIndex(index)]\n}\n\nprivate class ReversedList<T>(private val delegate: MutableList<T>) :
AbstractMutableList<T>() {\n    override val size: Int get() = delegate.size\n    override fun get(index: Int): T =
delegate[reverseElementIndex(index)]\n\n    override fun clear() = delegate.clear()\n    override fun removeAt(index:
Int): T = delegate.removeAt(reverseElementIndex(index))\n\n    override fun set(index: Int, element: T): T =
delegate.set(reverseElementIndex(index), element)\n    override fun add(index: Int, element: T) {\n
delegate.add(reversePositionIndex(index), element)\n    }\n}\n\nprivate fun List<*>.reverseElementIndex(index:
Int) =\n    if (index in 0..lastIndex) lastIndex - index else throw IndexOutOfBoundsException("Element index
$index must be in range [0..lastIndex].")\n\nprivate fun List<*>.reversePositionIndex(index: Int) =\n    if (index
in 0..size) size - index else throw IndexOutOfBoundsException("Position index $index must be in range
[0..size].")\n\n\n/**\n * Returns a reversed read-only view of the original List.\n * All changes made in the
original list will be reflected in the reversed one.\n * @sample samples.collections.ReversedViews.asReversedList\n
*/\npublic fun <T> List<T>.asReversed(): List<T> = ReversedListReadOnly(this)\n\n/**\n * Returns a reversed
mutable view of the original mutable List.\n * All changes made in the original list will be reflected in the reversed
one and vice versa.\n * @sample samples.collections.ReversedViews.asReversedMutableList\n
*/\n@kotlin.jvm.JvmName("asReversedMutable")\npublic fun <T> MutableList<T>.asReversed():
MutableList<T> = ReversedList(this)\n\n"/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("SequencesKt")\n@file:OptIn(ExperimentalTypeInference::class)\n\npackage kotlin.sequences\n\nimport kotlin.coroutines.*\nimport
kotlin.coroutines.intrinsics.*\nimport kotlin.experimental.ExperimentalTypeInference\n\n/**\n * Builds a
[Sequence] lazily yielding values one by one.\n *\n * @see kotlin.sequences.generateSequence\n *\n * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n */\n@SinceKotlin("1.3")\npublic fun <T>
sequence(@BuilderInference block: suspend SequenceScope<T>().() -> Unit): Sequence<T> = Sequence {
iterator(block) }\n\n@SinceKotlin("1.3")\n@Deprecated("Use 'sequence { }' function instead.",
ReplaceWith("sequence(builderAction)"), level =
DeprecationLevel.ERROR)\n@kotlin.internal.InlineOnly\npublic inline fun <T> buildSequence(@BuilderInference
noinline builderAction: suspend SequenceScope<T>().() -> Unit): Sequence<T> = Sequence { iterator(builderAction)
}\n\n/**\n * Builds an [Iterator] lazily yielding values one by one.\n *\n * @sample
samples.collections.Sequences.Building.buildIterator\n * @sample samples.collections.Iterables.Building.iterable\n
*/\n@SinceKotlin("1.3")\npublic fun <T> iterator(@BuilderInference block: suspend SequenceScope<T>().() ->
Unit): Iterator<T> {\n    val iterator = SequenceBuilderIterator<T>()\n    iterator.nextStep =

```

```

block.createCoroutineUnintercepted(receiver = iterator, completion = iterator)\n    return
iterator\n}\n\n@SinceKotlin("1.3")\n@Deprecated("Use 'iterator { }' function instead.",
ReplaceWith("iterator(builderAction)"), level = DeprecationLevel.ERROR)\n@kotlin.internal.InlineOnly\npublic
inline fun <T> buildIterator(@BuilderInference noinline builderAction: suspend SequenceScope<T>().-> Unit):
Iterator<T> = iterator(builderAction)\n\n/**\n * The scope for yielding values of a [Sequence] or an [Iterator],
provides [yield] and [yieldAll] suspension functions.\n *\n * @see sequence\n * @see iterator\n *\n * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n *\n * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n
*\n@RestrictsSuspension\n@SinceKotlin("1.3")\npublic abstract class SequenceScope<in T> internal
constructor() {\n    /**\n     * Yields a value to the [Iterator] being built and suspends\n     * until the next value is
requested.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     * @sample
samples.collections.Sequences.Building.buildFibonacciSequence\n     *\n     public abstract suspend fun yield(value:
T)\n\n     /**\n     * Yields all values from the `iterator` to the [Iterator] being built\n     * and suspends until all these
values are iterated and the next one is requested.\n     *\n     * The sequence of values returned by the given iterator
can be potentially infinite.\n     *\n     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n
*\n     public abstract suspend fun yieldAll(iterator: Iterator<T>)\n\n     /**\n     * Yields a collections of values to
the [Iterator] being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n
     * @sample samples.collections.Sequences.Building.buildSequenceYieldAll\n     *\n     public suspend fun
yieldAll(elements: Iterable<T>) {\n        if (elements is Collection && elements.isEmpty()) return\n        return
yieldAll(elements.iterator())\n    }\n\n    /**\n     * Yields potentially infinite sequence of values to the [Iterator]
being built\n     * and suspends until all these values are iterated and the next one is requested.\n     *\n     * The
sequence can be potentially infinite.\n     *\n     * @sample
samples.collections.Sequences.Building.buildSequenceYieldAll\n     *\n     public suspend fun yieldAll(sequence:
Sequence<T>) = yieldAll(sequence.iterator())\n}\n\n@Deprecated("Use SequenceScope class instead.",
ReplaceWith("SequenceScope<T>"), level = DeprecationLevel.ERROR)\npublic typealias SequenceBuilder<T> =
SequenceScope<T>\n\nprivate typealias State = Int\n\nprivate const val State_NotReady: State = 0\n\nprivate const
val State_ManyNotReady: State = 1\n\nprivate const val State_ManyReady: State = 2\n\nprivate const val State_Ready:
State = 3\n\nprivate const val State_Done: State = 4\n\nprivate const val State_Failed: State = 5\n\nprivate class
SequenceBuilderIterator<T> : SequenceScope<T>(), Iterator<T>, Continuation<Unit> {\n    private var state =
State_NotReady\n    private var nextValue: T? = null\n    private var nextIterator: Iterator<T>? = null\n    var
nextStep: Continuation<Unit>? = null\n\n    override fun hasNext(): Boolean {\n        while (true) {\n            when
(state) {\n                State_NotReady -> {}\n                State_ManyNotReady ->{\n                    if
(nextIterator!!.hasNext()) {\n                        state = State_ManyReady\n                        return true\n                    }
else {\n                        nextIterator = null\n                    }\n                } State_Done -> return false\n
                State_Ready, State_ManyReady -> return true\n                else -> throw exceptionalState()\n            }\n            state
= State_Failed\n            val step = nextStep!!\n            nextStep = null\n            step.resume(Unit)\n        }\n    }\n\n    override fun next(): T {\n        when (state) {\n            State_NotReady, State_ManyNotReady -> return
nextNotReady()\n            State_ManyReady -> {\n                state = State_ManyNotReady\n                return
nextIterator!!.next()\n            }\n            State_Ready -> {\n                state = State_NotReady\n
                @Suppress("UNCHECKED_CAST")\n                val result = nextValue as T\n                nextValue = null\n
                return result\n            }\n            else -> throw exceptionalState()\n        }\n    }\n\n    private fun nextNotReady(): T
{\n        if (!hasNext()) throw NoSuchElementException() else return next()\n    }\n\n    private fun
exceptionalState(): Throwable = when (state) {\n        State_Done -> NoSuchElementException()\n        State_Failed
-> IllegalStateException("Iterator has failed.")\n        else -> IllegalStateException("Unexpected state of the
iterator: $state")\n    }\n\n    override suspend fun yield(value: T) {\n        nextValue = value\n        state =
State_Ready\n        return suspendCoroutineUninterceptedOrReturn { c ->{\n            nextStep = c\n
COROUTINE_SUSPENDED\n        }}\n    }\n\n    override suspend fun yieldAll(iterator: Iterator<T>) {\n        if
(!iterator.hasNext()) return\n        nextIterator = iterator\n        state = State_ManyReady\n        return

```

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suspendCoroutineUninterceptedOrReturn { c ->\n        nextStep = c\n        COROUTINE_SUSPENDED\n    }\n    }\n    // Completion continuation implementation\n    override fun resumeWith(result: Result<Unit>) {\n    result.getOrThrow() // just rethrow exception if it is there\n        state = State_Done\n    }\n    override val context: CoroutineContext\n        get() = EmptyCoroutineContext\n    }\n    /*\n    * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n    * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n    */\n    package kotlin.collections\n    internal fun checkWindowSizeStep(size: Int, step: Int) {\n        require(size > 0 && step > 0) {\n            if (size != step)\n                \"Both size $size and step $step must be greater than zero.\"\n            else\n                \"size $size must be greater than zero.\"\n        }\n    }\n    internal fun <T> Sequence<T>.windowedSequence(size: Int, step: Int, partialWindows: Boolean, reuseBuffer: Boolean): Sequence<List<T>> {\n        checkWindowSizeStep(size, step)\n        return Sequence {\n            windowedIterator(iterator(), size, step, partialWindows, reuseBuffer) }\n    }\n    internal fun <T> windowedIterator(iterator: Iterator<T>, size: Int, step: Int, partialWindows: Boolean, reuseBuffer: Boolean): Iterator<List<T>> {\n        if (!iterator.hasNext()) return EmptyIterator\n        return iterator<List<T>> {\n            val bufferInitialCapacity = size.coerceAtMost(1024)\n            val gap = step - size\n            if (gap >= 0) {\n                var buffer = ArrayList<T>(bufferInitialCapacity)\n                var skip = 0\n                for (e in iterator) {\n                    if (skip > 0) {\n                        skip -= 1; continue\n                    }\n                    buffer.add(e)\n                    if (buffer.size == size) {\n                        yield(buffer)\n                        if (reuseBuffer) buffer.clear() else buffer = ArrayList(size)\n                        skip = gap\n                    }\n                    if (buffer.isNotEmpty()) {\n                        if (partialWindows || buffer.size == size) yield(buffer)\n                    }\n                }\n            } else {\n                var buffer = RingBuffer<T>(bufferInitialCapacity)\n                for (e in iterator) {\n                    buffer.add(e)\n                    if (buffer.isFull()) {\n                        if (buffer.size < size) {\n                            buffer = buffer.expanded(maxCapacity = size); continue\n                        }\n                        yield(if (reuseBuffer) buffer else ArrayList(buffer))\n                        buffer.removeFirst(step)\n                    }\n                    if (partialWindows) {\n                        while (buffer.size > step) {\n                            yield(if (reuseBuffer) buffer else ArrayList(buffer))\n                            buffer.removeFirst(step)\n                        }\n                        if (buffer.isNotEmpty()) yield(buffer)\n                    }\n                }\n            }\n        }\n    }\n    internal class MovingSubList<out E>(private val list: List<E>) : AbstractList<E>(), RandomAccess {\n        private var fromIndex: Int = 0\n        private var _size: Int = 0\n        fun move(fromIndex: Int, toIndex: Int) {\n            checkRangeIndexes(fromIndex, toIndex, list.size)\n            this.fromIndex = fromIndex\n            this._size = toIndex - fromIndex\n        }\n        override fun get(index: Int): E {\n            checkElementIndex(index, _size)\n            return list[fromIndex + index]\n        }\n        override val size: Int get() = _size\n    }\n    /**\n    * Provides ring buffer implementation.\n    * Buffer overflow is not allowed so [add] doesn't overwrite tail but raises an exception.\n    */\n    private class RingBuffer<T>(private val buffer: Array<Any?>, filledSize: Int) : AbstractList<T>(), RandomAccess {\n        init {\n            require(filledSize >= 0) { \"ring buffer filled size should not be negative but it is $filledSize\" }\n            require(filledSize <= buffer.size) { \"ring buffer filled size: $filledSize cannot be larger than the buffer size: ${buffer.size}\" }\n        }\n        constructor(capacity: Int) : this(arrayOfNulls<Any?>(capacity), 0)\n        private val capacity = buffer.size\n        private var startIndex: Int = 0\n        override var size: Int = filledSize\n        private set\n        override fun get(index: Int): T {\n            checkElementIndex(index, size)\n            @Suppress(\"UNCHECKED_CAST\")\n            return buffer[startIndex.forward(index)] as T\n        }\n        fun isFull() = size == capacity\n        override fun iterator(): Iterator<T> = object : AbstractIterator<T>() {\n            private var count = size\n            private var index = startIndex\n            override fun computeNext() {\n                if (count == 0) {\n                    done()\n                } else {\n                    @Suppress(\"UNCHECKED_CAST\")\n                    setNext(buffer[index] as T)\n                    index = index.forward(1)\n                    count--\n                }\n            }\n        }\n        @Suppress(\"UNCHECKED_CAST\")\n        override fun <T> toArray(array: Array<T>): Array<T> {\n            val result: Array<T?> =\n                if (array.size < this.size) array.copyOf(this.size) else array as Array<T?>\n            val size = this.size\n            var widx = 0\n            var idx = startIndex\n            while (widx < size && idx < capacity) {\n                result[widx] = buffer[idx] as T\n                widx++\n                idx++\n            }\n            idx = 0\n            while (widx < size) {\n                result[widx] = buffer[idx] as T\n                widx++\n                idx++\n            }\n            if (result.size > this.size) result[this.size] = null\n            return result as Array<T>\n        }\n        override fun toArray(): Array<Any?> {\n            return toArray(arrayOfNulls(size))\n        }\n        /**\n        * Creates a new ring buffer with the capacity equal to

```



```

===== \n/*\n
 * Sorts the given array using qsort algorithm.\n * \n @ExperimentalUnsignedTypes\n internal fun sortArray(array:
 UByteArray, fromIndex: Int, toIndex: Int) = quickSort(array, fromIndex, toIndex -
 1)\n @ExperimentalUnsignedTypes\n internal fun sortArray(array: UShortArray, fromIndex: Int, toIndex: Int) =
 quickSort(array, fromIndex, toIndex - 1)\n @ExperimentalUnsignedTypes\n internal fun sortArray(array: UIntArray,
 fromIndex: Int, toIndex: Int) = quickSort(array, fromIndex, toIndex -
 1)\n @ExperimentalUnsignedTypes\n internal fun sortArray(array: ULongArray, fromIndex: Int, toIndex: Int) =
 quickSort(array, fromIndex, toIndex - 1),"/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming
 Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
 license/LICENSE.txt file.\n * \n \n package kotlin\n \n import kotlin.internal.InlineOnly\n \n /*\n * Compares this
 object with the specified object for order. Returns zero if this object is equal\n * to the specified [other] object, a
 negative number if it's less than [other], or a positive number\n * if it's greater than [other].\n * \n * This function
 delegates to [Comparable.compareTo] and allows to call it in infix form.\n
 * \n @InlineOnly\n @SinceKotlin("1.6")\n public inline infix fun <T> Comparable<T>.compareTo(other: T): Int
 =\n this.compareTo(other)\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
 contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
 license/LICENSE.txt file.\n * \n \n package kotlin.contracts\n \n import kotlin.internal.ContractsDsl\n \n import
 kotlin.internal.InlineOnly\n \n /*\n * This marker distinguishes the experimental contract declaration API and is
 used to opt-in for that feature\n * when declaring contracts of user functions.\n * \n * Any usage of a declaration
 annotated with `@ExperimentalContracts` must be accepted either by\n * annotating that usage with the [OptIn]
 annotation, e.g. `@OptIn(ExperimentalContracts::class)`,\n * or by using the compiler argument `-Xopt-
 in=kotlin.contracts.ExperimentalContracts`.\n
 * \n @Suppress("DEPRECATION")\n @Retention(AnnotationRetention.BINARY)\n @SinceKotlin("1.3")\n @Ex
 perimental\n @RequiresOptIn\n @MustBeDocumented\n public annotation class ExperimentalContracts\n \n /*\n *
 Provides a scope, where the functions of the contract DSL, such as [returns], [callsInPlace], etc.,\n * can be used to
 describe the contract of a function.\n * \n * This type is used as a receiver type of the lambda function passed to the
 [contract] function.\n * \n * @see contract\n
 * \n @ContractsDsl\n @ExperimentalContracts\n @SinceKotlin("1.3")\n public interface ContractBuilder {\n //*\n
 * Describes a situation when a function returns normally, without any exceptions thrown.\n * \n * Use
 [SimpleEffect.implies] function to describe a conditional effect that happens in such case.\n * \n * \n //
 @sample samples.contracts.returnsContract\n @ContractsDsl public fun returns(): Returns\n \n //*\n *
 Describes a situation when a function returns normally with the specified return [value].\n * \n * The possible
 values of [value] are limited to `true`, `false` or `null`.\n * \n * Use [SimpleEffect.implies] function to describe a
 conditional effect that happens in such case.\n * \n * \n // @sample samples.contracts.returnsTrueContract\n
 // @sample samples.contracts.returnsFalseContract\n // @sample samples.contracts.returnsNullContract\n
 @ContractsDsl public fun returns(value: Any?): Returns\n \n //*\n * Describes a situation when a function
 returns normally with any value that is not `null`.\n * \n * Use [SimpleEffect.implies] function to describe a
 conditional effect that happens in such case.\n * \n * \n // @sample
 samples.contracts.returnsNotNullContract\n @ContractsDsl public fun returnsNotNull(): ReturnsNotNull\n \n
 //*\n * Specifies that the function parameter [lambda] is invoked in place.\n * \n * This contract specifies
 that:\n * 1. the function [lambda] can only be invoked during the call of the owner function,\n * and it won't be
 invoked after that owner function call is completed;\n * 2. _(optionally)_ the function [lambda] is invoked the
 amount of times specified by the [kind] parameter,\n * see the [InvocationKind] enum for possible values.\n
 * \n * A function declaring the `callsInPlace` effect must be _inline_.\n * \n * \n // @sample
 samples.contracts.callsInPlaceAtMostOnceContract\n * @sample
 samples.contracts.callsInPlaceAtLeastOnceContract\n * @sample
 samples.contracts.callsInPlaceExactlyOnceContract\n * @sample
 samples.contracts.callsInPlaceUnknownContract\n * \n @ContractsDsl public fun <R> callsInPlace(lambda:

```

Function<R>, kind: InvocationKind = InvocationKind.UNKNOWN): CallsInPlace\n\n\n/\*\*\n \* Specifies how many times a function invokes its function parameter in place.\n \* See [ContractBuilder.callsInPlace] for the details of the call-in-place function contract.\n

```

*\n@ContractsDsl\n@ExperimentalContracts\n@SinceKotlin("1.3")\npublic enum class InvocationKind {\n
/**\n * A function parameter will be invoked one time or not invoked at all.\n * // @sample
samples.contracts.callsInPlaceAtMostOnceContract\n @ContractsDsl AT_MOST_ONCE,\n /**\n * A function parameter will be invoked one or more times.\n * // @sample
samples.contracts.callsInPlaceAtLeastOnceContract\n @ContractsDsl AT_LEAST_ONCE,\n /**\n * A function parameter will be invoked exactly one time.\n * // @sample
samples.contracts.callsInPlaceExactlyOnceContract\n @ContractsDsl EXACTLY_ONCE,\n /**\n * A function parameter is called in place, but it's unknown how many times it can be called.\n * // @sample
samples.contracts.callsInPlaceUnknownContract\n @ContractsDsl UNKNOWN\n}\n\n/**\n * Specifies the contract of a function.\n * The contract description must be at the beginning of a function and have at least one effect.\n * Only the top-level functions can have a contract for now.\n * @param builder the lambda where the contract of a function is described with the help of the [ContractBuilder] members.\n * // @sample
samples.contracts.returnsContract\n* @sample samples.contracts.returnsTrueContract\n* @sample
samples.contracts.returnsFalseContract\n* @sample samples.contracts.returnsNullContract\n* @sample
samples.contracts.returnsNotNullContract\n* @sample samples.contracts.callsInPlaceAtMostOnceContract\n* @sample
samples.contracts.callsInPlaceAtLeastOnceContract\n* @sample
samples.contracts.callsInPlaceExactlyOnceContract\n* @sample
samples.contracts.callsInPlaceUnknownContract\n*\n@ContractsDsl\n@ExperimentalContracts\n@InlineOnly\n@SinceKotlin("1.3")\n@Suppress("UNUSED_PARAMETER")\npublic inline fun contract(builder: ContractBuilder.() -> Unit) { }\n", "/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\npackage kotlin.coroutines\n\n/**\n * Marks coroutine context element that intercepts coroutine continuations.\n * The coroutines framework uses [ContinuationInterceptor.Key] to retrieve the interceptor and\n * intercepts all coroutine continuations with [interceptContinuation] invocations.\n * [ContinuationInterceptor] behaves like a [polymorphic element][AbstractCoroutineContextKey], meaning that\n * its implementation delegates [get][CoroutineContext.Element.get] and [minusKey][CoroutineContext.Element.minusKey]\n * to [getPolymorphicElement] and [minusPolymorphicKey] respectively.\n * [ContinuationInterceptor] subtypes can be extracted from the coroutine context using either [ContinuationInterceptor.Key]\n * or subtype key if it extends [AbstractCoroutineContextKey].\n *\n@SinceKotlin("1.3")\npublic interface ContinuationInterceptor : CoroutineContext.Element {\n /**\n * The key that defines *the* context interceptor.\n * companion object Key : CoroutineContext.Key<ContinuationInterceptor>\n /**\n * Returns continuation that wraps the original [continuation], thus intercepting all resumptions.\n * This function is invoked by coroutines framework when needed and the resulting continuations are\n * cached internally per each instance of the original [continuation].\n * This function may simply return original [continuation] if it does not want to intercept this particular continuation.\n * When the original [continuation] completes, coroutine framework invokes [releaseInterceptedContinuation]\n * with the resulting continuation if it was intercepted, that is if `interceptContinuation` had previously\n * returned a different continuation instance.\n * // @sample
public fun <T> interceptContinuation(continuation: Continuation<T>): Continuation<T>\n /**\n * Invoked for the continuation instance returned by [interceptContinuation] when the original\n * continuation completes and will not be used anymore. This function is invoked only if [interceptContinuation]\n * had returned a different continuation instance from the one it was invoked with.\n * Default implementation does nothing.\n * // @sample
@param continuation Continuation instance returned by this interceptor's [interceptContinuation] invocation.\n * // @sample
public fun releaseInterceptedContinuation(continuation: Continuation<*>) {\n /* do nothing by default
}\n\n public override operator fun <E : CoroutineContext.Element> get(key: CoroutineContext.Key<E>):

```

```

E? {\n    // getPolymorphicKey specialized for ContinuationInterceptor key\n
@OptIn(ExperimentalStdlibApi::class)\n    if (key is AbstractCoroutineContextKey<*, *>) {\n
@Suppress("UNCHECKED_CAST")\n        return if (key.isSubKey(this.key)) key.tryCast(this) as? E else
null\n    }\n    @Suppress("UNCHECKED_CAST")\n        return if (ContinuationInterceptor === key) this as
E else null\n    }\n\n    public override fun minusKey(key: CoroutineContext.Key<*>): CoroutineContext {\n
// minusPolymorphicKey specialized for ContinuationInterceptor key\n
@OptIn(ExperimentalStdlibApi::class)\n    if (key is AbstractCoroutineContextKey<*, *>) {\n        return if
(key.isSubKey(this.key) && key.tryCast(this) != null) EmptyCoroutineContext else this\n    }\n    return if
(ContinuationInterceptor === key) EmptyCoroutineContext else this\n    }\n}\n", /*\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\n/**\n *
Persistent context for the coroutine. It is an indexed set of [Element] instances.\n * An indexed set is a mix between
a set and a map.\n * Every element in this set has a unique [Key].\n */\n@SinceKotlin("1.3")\npublic interface
CoroutineContext {\n    /**\n     * Returns the element with the given [key] from this context or `null`.\n     */\n    public operator fun <E : Element> get(key: Key<E>): E?\n\n    /**\n     * Accumulates entries of this context
starting with [initial] value and applying [operation]\n     * from left to right to current accumulator value and each
element of this context.\n     */\n    public fun <R> fold(initial: R, operation: (R, Element) -> R): R\n\n    /**\n     *
Returns a context containing elements from this context and elements from other [context].\n     * The elements
from this context with the same key as in the other one are dropped.\n     */\n    public operator fun plus(context:
CoroutineContext): CoroutineContext =\n        if (context === EmptyCoroutineContext) this else // fast path -- avoid
lambda creation\n            context.fold(this) { acc, element ->\n                val removed =
acc.minusKey(element.key)\n                if (removed === EmptyCoroutineContext) element else {\n                    //
make sure interceptor is always last in the context (and thus is fast to get when present)\n                    val interceptor
= removed[ContinuationInterceptor]\n                    if (interceptor == null) CombinedContext(removed, element) else
{\n                        val left = removed.minusKey(ContinuationInterceptor)\n                        if (left ===
EmptyCoroutineContext) CombinedContext(element, interceptor) else\n                            CombinedContext(CombinedContext(left, element), interceptor)\n                    }\n                }\n            }\n\n    /**\n     * Returns a context containing elements from this context, but without an element with\n     * the specified [key].\n     */\n    public fun minusKey(key: Key<*>): CoroutineContext\n\n    /**\n     * Key for the elements of
[CoroutineContext]. [E] is a type of element with this key.\n     */\n    public interface Key<E : Element> {\n\n        /**\n         * An element of the [CoroutineContext]. An element of the coroutine context is a singleton context by itself.\n         */\n        public interface Element : CoroutineContext {\n            /**\n             * A key of this coroutine context element.\n             */\n            public val key: Key<*>\n\n            public override operator fun <E : Element> get(key: Key<E>): E? =\n                @Suppress("UNCHECKED_CAST")\n                    if (this.key == key) this as E else null\n\n            public override
fun <R> fold(initial: R, operation: (R, Element) -> R): R =\n                operation(initial, this)\n\n            public override
fun minusKey(key: Key<*>): CoroutineContext =\n                    if (this.key == key) EmptyCoroutineContext else this\n            }\n        }\n    }\n}\n", /*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.coroutines\n\nimport kotlin.coroutines.CoroutineContext.Element\nimport
kotlin.coroutines.CoroutineContext.Key\n\n/**\n * Base class for [CoroutineContext.Element] implementations.\n */\n@SinceKotlin("1.3")\npublic abstract class AbstractCoroutineContextElement(public override val key:
Key<*>) : Element\n\n/**\n * Base class for [CoroutineContext.Key] associated with polymorphic
[CoroutineContext.Element] implementation.\n * Polymorphic element implementation implies delegating its
[get][Element.get] and [minusKey][Element.minusKey]\n * to [getPolymorphicElement] and
[minusPolymorphicKey] respectively.\n */\n\n/**\n * Polymorphic elements can be extracted from the coroutine context
using both element key and its supertype key.\n * Example of polymorphic elements:\n */\n\n/**\n * open class
BaseElement : CoroutineContext.Element {\n    /**\n     * companion object Key : CoroutineContext.Key<BaseElement>\n     */\n    override val key: CoroutineContext.Key<*> get() = Key\n    /**\n     * // It is important to use getPolymorphicKey and

```

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minusPolymorphicKey\n *   override fun <E : CoroutineContext.Element> get(key: CoroutineContext.Key<E>):
E? = getPolymorphicElement(key)\n *   override fun minusKey(key: CoroutineContext.Key<*>):
CoroutineContext = minusPolymorphicKey(key)\n * }\n * \n * class DerivedElement : BaseElement() {\n *
companion object Key : AbstractCoroutineContextKey<BaseElement, DerivedElement>(BaseElement, { it as?
DerivedElement })\n * }\n * // Now it is possible to query both `BaseElement` and `DerivedElement`\n *
someContext[BaseElement] // Returns BaseElement?, non-null both for BaseElement and DerivedElement
instances\n * someContext[DerivedElement] // Returns DerivedElement?, non-null only for DerivedElement
instance\n * ```\n * @param B base class of a polymorphic element\n * @param baseKey an instance of base key\n
* @param E element type associated with the current key\n * @param safeCast a function that can safely cast
abstract [CoroutineContext.Element] to the concrete [E] type\n *           and return the element if it is a subtype
of [E] or `null` otherwise.\n * \n * \n * @SinceKotlin("1.3")\n * @ExperimentalStdlibApi\n * public abstract class
AbstractCoroutineContextKey<B : Element, E : B>(\n *     baseKey: Key<B>,\n *     private val safeCast: (element:
Element) -> E?)\n * ) : Key<E> {\n *     private val topmostKey: Key<*> = if (baseKey is
AbstractCoroutineContextKey<*, *>) baseKey.topmostKey else baseKey\n *     internal fun tryCast(element:
Element): E? = safeCast(element)\n *     internal fun isSubKey(key: Key<*>): Boolean = key === this || topmostKey
=== key\n * }\n * \n * Returns the current element if it is associated with the given [key] in a polymorphic manner
or `null` otherwise.\n * This method returns non-null value if either [Element.key] is equal to the given [key] or if
the [key] is associated\n * with [Element.key] via [AbstractCoroutineContextKey].\n * See
[AbstractCoroutineContextKey] for the example of usage.\n
* \n * \n * @SinceKotlin("1.3")\n * @ExperimentalStdlibApi\n * public fun <E : Element>
Element.getPolymorphicElement(key: Key<E>): E? {\n *     if (key is AbstractCoroutineContextKey<*, *>) {\n *
@Suppress("UNCHECKED_CAST")\n *         return if (key.isSubKey(this.key)) key.tryCast(this) as? E else null\n *
}\n *     @Suppress("UNCHECKED_CAST")\n *         return if (this.key === key) this as E else null\n * }\n * \n * Returns empty coroutine context if the element is associated with the given [key] in a polymorphic manner\n * or
`null` otherwise.\n * This method returns empty context if either [Element.key] is equal to the given [key] or if the
[key] is associated\n * with [Element.key] via [AbstractCoroutineContextKey].\n * See
[AbstractCoroutineContextKey] for the example of usage.\n
* \n * \n * @SinceKotlin("1.3")\n * @ExperimentalStdlibApi\n * public fun Element.minusPolymorphicKey(key: Key<*>):
CoroutineContext {\n *     if (key is AbstractCoroutineContextKey<*, *>) {\n *         return if (key.isSubKey(this.key)
&& key.tryCast(this) != null) EmptyCoroutineContext else this\n *     }\n *     return if (this.key === key)
EmptyCoroutineContext else this\n * }\n * \n * An empty coroutine context.\n * \n * \n * @SinceKotlin("1.3")\n * public
object EmptyCoroutineContext : CoroutineContext, Serializable {\n *     private const val serialVersionUID: Long =
0\n *     private fun readResolve(): Any = EmptyCoroutineContext\n *     public override fun <E : Element> get(key:
Key<E>): E? = null\n *     public override fun <R> fold(initial: R, operation: (R, Element) -> R): R = initial\n *     public
override fun plus(context: CoroutineContext): CoroutineContext = context\n *     public override fun minusKey(key:
Key<*>): CoroutineContext = this\n *     public override fun hashCode(): Int = 0\n *     public override fun toString():
String = "EmptyCoroutineContext"\n * }\n * \n * ----- internal impl -----\n * \n * // this class is not
exposed, but is hidden inside implementations\n * // this is a left-biased list, so that `plus` works
naturally\n * \n * \n * @SinceKotlin("1.3")\n * internal class CombinedContext(\n *     private val left: CoroutineContext,\n *     private val element: Element\n * ) : CoroutineContext, Serializable {\n *     override fun <E : Element> get(key:
Key<E>): E? {\n *         var cur = this\n *         while (true) {\n *             cur.element[key]?.let { return it }\n *             val next
= cur.left\n *             if (next is CombinedContext) {\n *                 cur = next\n *             } else {\n *                 return
next[key]\n *             }\n *         }\n *     }\n *     public override fun <R> fold(initial: R, operation: (R, Element) -> R): R =\n *         operation(left.fold(initial, operation), element)\n *     public override fun minusKey(key: Key<*>):
CoroutineContext {\n *         element[key]?.let { return left }\n *         val newLeft = left.minusKey(key)\n *         return
when {\n *             newLeft === left -> this\n *             newLeft === EmptyCoroutineContext -> element\n *             else ->
CombinedContext(newLeft, element)\n *         }\n *     }\n *     private fun size(): Int {\n *         var cur = this\n *         var size
= 2\n *         while (true) {\n *             cur = cur.left as? CombinedContext ?: return size\n *             size++\n *         }\n *     }\n * }\n *

```

```

private fun contains(element: Element): Boolean =\n    get(element.key) == element\n\n private fun
containsAll(context: CombinedContext): Boolean {\n    var cur = context\n    while (true) {\n        if
(!contains(cur.element)) return false\n        val next = cur.left\n        if (next is CombinedContext) {\n
cur = next\n        } else {\n            return contains(next as Element)\n        }\n    }\n\n override fun
equals(other: Any?): Boolean =\n    this === other || other is CombinedContext && other.size() == size() &&
other.containsAll(this)\n\n override fun hashCode(): Int = left.hashCode() + element.hashCode()\n\n override
fun toString(): String =\n    "[" + fold("") { acc, element ->\n        if (acc.isEmpty()) element.toString() else
"\$acc, \$element"\n    } + "]\n\n private fun writeReplace(): Any {\n    val n = size()\n    val elements =
arrayOfNulls<CoroutineContext>(n)\n    var index = 0\n    fold(Unit) { _, element -> elements[index++] =
element }\n    check(index == n)\n    @Suppress("UNCHECKED_CAST")\n    return Serialized(elements
as Array<CoroutineContext>)\n }\n\n private class Serialized(val elements: Array<CoroutineContext>) :
Serializable {\n    companion object {\n        private const val serialVersionUID: Long = 0L\n    }\n\n private fun readResolve(): Any = elements.fold(EmptyCoroutineContext, CoroutineContext::plus)\n }\n\n"/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*/\n\n@file:kotlin.jvm.JvmName("IntrinsicsKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage
kotlin.coroutines.intrinsics\n\nimport kotlin.contracts.*\nimport kotlin.coroutines.*\nimport
kotlin.internal.InlineOnly\n\n/**\n * Obtains the current continuation instance inside suspend functions and either
suspends\n * currently running coroutine or returns result immediately without suspension.\n * If the [block]
returns the special [COROUTINE_SUSPENDED] value, it means that suspend function did suspend the execution
and will\n * not return any result immediately. In this case, the [Continuation] provided to the [block] shall be\n *
resumed by invoking [Continuation.resumeWith] at some moment in the\n * future when the result becomes
available to resume the computation.\n * Otherwise, the return value of the [block] must have a type assignable
to [T] and represents the result of this suspend function.\n * It means that the execution was not suspended and the
[Continuation] provided to the [block] shall not be invoked.\n * As the result type of the [block] is declared as
`Any?` and cannot be correctly type-checked,\n * its proper return type remains on the conscience of the suspend
function's author.\n * Invocation of [Continuation.resumeWith] resumes coroutine directly in the invoker's
thread without going through the\n * [ContinuationInterceptor] that might be present in the coroutine's
[CoroutineContext].\n * It is the invoker's responsibility to ensure that a proper invocation context is established.\n *
[Continuation.intercepted] can be used to acquire the intercepted continuation.\n * Note that it is not
recommended to call either [Continuation.resume] nor [Continuation.resumeWithException] functions
synchronously\n * in the same stackframe where suspension function is run. Use [suspendCoroutine] as a safer way
to obtain current\n * continuation instance.\n
*/\n\n@SinceKotlin("1.3")\n@InlineOnly\n@Suppress("UNUSED_PARAMETER",
"RedundantSuspendModifier")\npublic suspend inline fun <T>
suspendCoroutineUninterceptedOrReturn(crossinline block: (Continuation<T>) -> Any?): T {\n    contract {
callsInPlace(block, InvocationKind.EXACTLY_ONCE) }\n    throw NotImplementedError("Implementation of
suspendCoroutineUninterceptedOrReturn is intrinsic")\n}\n\n/**\n * This value is used as a return value of
[suspendCoroutineUninterceptedOrReturn] `block` argument to state that\n * the execution was suspended and will
not return any result immediately.\n * Note: this value should not be used in general code. Using it outside
of the context of\n * `suspendCoroutineUninterceptedOrReturn` function return value (including, but not limited
to,\n * storing this value in other properties, returning it from other functions, etc)\n * can lead to unspecified
behavior of the code.\n */\n\n// It is implemented as property with getter to avoid ProGuard <clinit> problem with
multifile IntrinsicsKt class\n@SinceKotlin("1.3")\npublic val COROUTINE_SUSPENDED: Any get() =
CoroutineSingletons.COROUTINE_SUSPENDED\n\n// Using enum here ensures two important properties:\n// 1.
It makes SafeContinuation serializable with all kinds of serialization frameworks (since all of them natively support
enums)\n// 2. It improves debugging experience, since you clearly see toString() value of those objects and what
package they come from\n@SinceKotlin("1.3")\n@PublishedApi // This class is Published API via serialized

```

representation of SafeContinuation, don't rename/move\ninternal enum class CoroutineSingletons {  
COROUTINE\_SUSPENDED, UNDECIDED, RESUMED }\n", "/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and  
Kotlin Programming Language contributors.\n \* Use of this source code is governed by the Apache 2.0 license that  
can be found in the license/LICENSE.txt file.\n \*/\n\npackage kotlin.experimental\n\n/\*\* Performs a bitwise AND  
operation between the two values. \*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun  
Byte.and(other: Byte): Byte = (this.toInt() and other.toInt()).toByte()\n\n/\*\* Performs a bitwise OR operation  
between the two values. \*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun  
Byte.or(other: Byte): Byte = (this.toInt() or other.toInt()).toByte()\n\n/\*\* Performs a bitwise XOR operation  
between the two values. \*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun  
Byte.xor(other: Byte): Byte = (this.toInt() xor other.toInt()).toByte()\n\n/\*\* Inverts the bits in this value.  
\*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.inv(): Byte =  
(this.toInt().inv()).toByte()\n\n/\*\* Performs a bitwise AND operation between the two values.  
\*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.and(other: Short): Short =  
(this.toInt() and other.toInt()).toShort()\n\n/\*\* Performs a bitwise OR operation between the two values.  
\*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.or(other: Short): Short =  
(this.toInt() or other.toInt()).toShort()\n\n/\*\* Performs a bitwise XOR operation between the two values.  
\*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline infix fun Short.xor(other: Short): Short =  
(this.toInt() xor other.toInt()).toShort()\n\n/\*\* Inverts the bits in this value.  
\*/\n@SinceKotlin("1.1")\n@kotlin.internal.InlineOnly\npublic inline fun Short.inv(): Short =  
(this.toInt().inv()).toShort()\n\n", "/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language  
contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the  
license/LICENSE.txt file.\n \*/\n\npackage kotlin.experimental\n\n/\*\*\n \* The experimental marker for type  
inference augmenting annotations.\n \* Any usage of a declaration annotated with  
`@ExperimentalTypeInference` must be accepted either by\n \* annotating that usage with the [OptIn] annotation,  
e.g. `@OptIn(ExperimentalTypeInference::class)`,\n \* or by using the compiler argument `-Xopt-  
in=kotlin.experimental.ExperimentalTypeInference`.\n \*/\n@Suppress("DEPRECATION")\n@Experimental(level  
= Experimental.Level.ERROR)\n@RequiresOptIn(level =  
RequiresOptIn.Level.ERROR)\n@MustBeDocumented\n@Retention(AnnotationRetention.BINARY)\n@Target(A  
nnotationTarget.ANNOTATION\_CLASS)\n@SinceKotlin("1.3")\npublic annotation class  
ExperimentalTypeInference\n", "/\*\n \* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language  
contributors.\n \* Use of this source code is governed by the Apache 2.0 license that can be found in the  
license/LICENSE.txt file.\n \*/\n\npackage kotlin.internal\n\n/\*\*\n \* Specifies that the corresponding type should be  
ignored during type inference.\n \*/\n@Target(AnnotationTarget.TYPE)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class  
NoInfer\n\n/\*\*\n \* Specifies that the constraint built for the type during type inference should be an equality one.\n \*/\n@Target(AnnotationTarget.TYPE)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class  
Exact\n\n/\*\*\n \* Specifies that a corresponding member has the lowest priority in overload resolution.\n \*/\n@Target(AnnotationTarget.FUNCTION,  
AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class  
LowPriorityInOverloadResolution\n\n/\*\*\n \* Specifies that the corresponding member has the highest priority in  
overload resolution. Effectively this means that\n \* an extension annotated with this annotation will win in overload  
resolution over a member with the same signature.\n \*/\n@Target(AnnotationTarget.FUNCTION,  
AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class  
HidesMembers\n\n/\*\*\n \* The value of this type parameter should be mentioned in input types (argument types,  
receiver type or expected type).\n \*/\n@Target(AnnotationTarget.TYPE\_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\ninternal  
annotation class OnlyInputTypes\n\n/\*\*\n \* Specifies that this function should not be called directly without  
inlining\n \*/\n@Target(AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY,

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AnnotationTarget.PROPERTY_GETTER,
AnnotationTarget.PROPERTY_SETTER)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class
InlineOnly\n\n/**\n * Specifies that this declaration can have dynamic receiver type.\n
*/\n@Target(AnnotationTarget.FUNCTION,
AnnotationTarget.PROPERTY)\n@Retention(AnnotationRetention.BINARY)\ninternal annotation class
DynamicExtension\n\n/**\n * The value of this parameter should be a property reference expression (`this::foo`),
referencing a `lateinit` property,\n * the backing field of which is accessible at the point where the corresponding
argument is passed.\n
*/\n@Target(AnnotationTarget.VALUE_PARAMETER)\n@Retention(AnnotationRetention.BINARY)\n@SinceK
otlin("1.2")\ninternal annotation class AccessibleLateinitPropertyLiteral\n\n/**\n * Specifies that this declaration is
only completely supported since the specified version.\n *\n * The Kotlin compiler of an earlier version is going to
report a diagnostic on usages of this declaration.\n * The diagnostic message can be specified with [message], or via
[errorCode] (takes less space, but might not be immediately clear\n * to the user). The diagnostic severity can be
specified with [level]: WARNING/ERROR mean that either a warning or an error\n * is going to be reported,
HIDDEN means that the declaration is going to be removed from resolution completely.\n *\n * [versionKind]
specifies which version should be compared with the [version] value, when compiling the usage of the annotated
declaration.\n * Note that prior to 1.2, only [RequireKotlinVersionKind.LANGUAGE_VERSION] was supported,
so the Kotlin compiler before 1.2 is going to\n * treat any [RequireKotlin] as if it requires the language version.
Since 1.2, the Kotlin compiler supports\n * [RequireKotlinVersionKind.LANGUAGE_VERSION],
[RequireKotlinVersionKind.COMPILER_VERSION] and [RequireKotlinVersionKind.API_VERSION].\n * If the
actual value of [versionKind] is something different (e.g. a new version kind, added in future versions of Kotlin),\n *
Kotlin 1.2 is going to ignore this [RequireKotlin] altogether, where as Kotlin before 1.2 is going to treat this as a
requirement\n * on the language version.\n *\n * This annotation is erased at compile time; its arguments are stored
in a more compact form in the Kotlin metadata.\n */\n@Target(AnnotationTarget.CLASS,
AnnotationTarget.FUNCTION, AnnotationTarget.PROPERTY, AnnotationTarget.CONSTRUCTOR,
AnnotationTarget.TYPEALIAS)\n@Retention(AnnotationRetention.SOURCE)\n@Repeatable\n@SinceKotlin("1.
2")\ninternal annotation class RequireKotlin(\n    val version: String,\n    val message: String = "",\n    val level:
DeprecationLevel = DeprecationLevel.ERROR,\n    val versionKind: RequireKotlinVersionKind =
RequireKotlinVersionKind.LANGUAGE_VERSION,\n    val errorCode: Int = -1)\n\n/**\n * The kind of the
version that is required by [RequireKotlin].\n */\n@SinceKotlin("1.2")\ninternal enum class
RequireKotlinVersionKind {\n    LANGUAGE_VERSION,\n    COMPILER_VERSION,\n
API_VERSION,\n}\n\n/**\n * Specifies that this declaration is a part of special DSL, used for constructing
function's contract.\n */\n@Retention(AnnotationRetention.BINARY)\n@SinceKotlin("1.2")\ninternal annotation
class ContractsDsl\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\npackage kotlin.properties\n\nimport kotlin.reflect.KProperty\n\n/**\n * Standard
property delegates.\n */\npublic object Delegates {\n    /**\n     * Returns a property delegate for a read/write
property with a non-`null` value that is initialized not during\n     * object construction time but at a later time.
Trying to read the property before the initial value has been\n     * assigned results in an exception.\n     */\n     *
@sample samples.properties.Delegates.notNullDelegate\n     */\n     public fun <T : Any> notNull():
ReadWriteProperty<Any?, T> = NotNullVar()\n\n    /**\n     * Returns a property delegate for a read/write property
that calls a specified callback function when changed.\n     * @param initialValue the initial value of the property.\n
     * @param onChange the callback which is called after the change of the property is made. The value of the
property\n     * has already been changed when this callback is invoked.\n     */\n     * @sample
samples.properties.Delegates.observableDelegate\n     */\n     public inline fun <T> observable(initialValue: T,
crossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Unit):\n
ReadWriteProperty<Any?, T> =\n     object : ObservableProperty<T>(initialValue) {\n         override fun
afterChange(property: KProperty<*>, oldValue: T, newValue: T) = onChange(property, oldValue, newValue)\n

```

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}

/**
 * Returns a property delegate for a read/write property that calls a specified callback function when
 * changed,
 * allowing the callback to veto the modification.
 * @param initialValue the initial value of the
 * property.
 * @param onChange the callback which is called before a change to the property value is attempted.
 * The value of the property hasn't been changed yet, when this callback is invoked.
 * If the callback returns
 * `true` the value of the property is being set to the new value,
 * and if the callback returns `false` the new value
 * is discarded and the property remains its old value.
 *
 * @sample
 * samples.properties.Delegates.vetoableDelegate
 * @sample
 * samples.properties.Delegates.throwVetoableDelegate
 */
public inline fun <T> vetoable(initialValue: T,
crossinline onChange: (property: KProperty<*>, oldValue: T, newValue: T) -> Boolean):
ReadWriteProperty<Any?, T> =
    object : ObservableProperty<T>(initialValue) {
        override fun
        beforeChange(property: KProperty<*>, oldValue: T, newValue: T): Boolean =
            onChange(property, oldValue,
            newValue)
    }

private class NotNullVar<T : Any>(): ReadWriteProperty<Any?, T> {
    private var
    value: T? = null
    public override fun getValue(thisRef: Any?, property: KProperty<*>): T {
        return value
        ?: throw IllegalStateException("Property ${property.name} should be initialized before get.")
    }
    public
    override fun setValue(thisRef: Any?, property: KProperty<*>, value: T) {
        this.value = value
    }
}

"/**
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 * this source code is governed by the Apache 2.0 license that can be found in the
 * license/LICENSE.txt file.
 */
package kotlin.properties
import kotlin.reflect.KProperty

/**
 * Base interface that can be used for
 * implementing property delegates of read-only properties.
 * This is provided only for convenience; you don't
 * have to extend this interface
 * as long as your property delegate has methods with the same signatures.
 *
 * @param T the type of object which owns the delegated property.
 * @param V the type of the property value.
 */
public fun interface ReadOnlyProperty<in T, out V> {
    /**
     * Returns the value of the property for the
     * given object.
     * @param thisRef the object for which the value is requested.
     * @param property the
     * metadata for the property.
     * @return the property value.
     */
    public operator fun getValue(thisRef: T,
property: KProperty<*>): V

/**
 * Base interface that can be used for implementing property delegates of
 * read-write properties.
 * This is provided only for convenience; you don't have to extend this interface
 * as
 * long as your property delegate has methods with the same signatures.
 *
 * @param T the type of object which
 * owns the delegated property.
 * @param V the type of the property value.
 */
public interface
ReadWriteProperty<in T, V> : ReadOnlyProperty<T, V> {
    /**
     * Returns the value of the property for the
     * given object.
     * @param thisRef the object for which the value is requested.
     * @param property the
     * metadata for the property.
     * @return the property value.
     */
    public override operator fun
    getValue(thisRef: T, property: KProperty<*>): V

    /**
     * Sets the value of the property for the given
     * object.
     * @param thisRef the object for which the value is requested.
     * @param property the metadata for
     * the property.
     * @param value the value to set.
     */
    public operator fun setValue(thisRef: T, property:
KProperty<*>, value: V)

/**
 * Base interface that can be used for implementing property delegate
 * providers.
 * This is provided only for convenience; you don't have to extend this interface
 * as
 * long as your
 * delegate provider has a method with the same signature.
 *
 * @param T the type of object which owns the
 * delegated property.
 * @param D the type of property delegates this provider provides.
 */
@SinceKotlin("1.4")
public fun interface PropertyDelegateProvider<in T, out D> {
    /**
     * Returns the
     * delegate of the property for the given object.
     * This function can be used to extend the logic of creating
     * the object (e.g. perform validation checks)
     * to which the property implementation is delegated.
     *
     * @param thisRef the object for which property delegate is requested.
     * @param property the metadata for the
     * property.
     * @return the property delegate.
     */
    public operator fun provideDelegate(thisRef: T, property:
KProperty<*>): D
}

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 * contributors.
 * Use of this source code is governed by the Apache 2.0 license that can be found in the
 * license/LICENSE.txt file.
 */
package kotlin.properties
import kotlin.reflect.KProperty

/**
 * Implements the core logic of a property delegate for a read/write property that calls callback functions when
 * changed.
 * @param initialValue the initial value of the property.
 */
public abstract class

```

```

ObservableProperty<V>(initialValue: V) : ReadWriteProperty<Any?, V> {\n    private var value = initialValue\n\n    /**\n     * The callback which is called before a change to the property value is attempted.\n     * The value of the property hasn't been changed yet, when this callback is invoked.\n     * If the callback returns `true` the value of the property is being set to the new value,\n     * and if the callback returns `false` the new value is discarded and the property remains its old value.\n     */\n    protected open fun beforeChange(property: KProperty<*>, oldValue: V, newValue: V): Boolean = true\n\n    /**\n     * The callback which is called after the change of the property is made. The value of the property\n     * has already been changed when this callback is invoked.\n     */\n    protected open fun afterChange(property: KProperty<*>, oldValue: V, newValue: V): Unit {}

    public override fun getValue(thisRef: Any?, property: KProperty<*>): V {\n        return value\n    }\n\n    public override fun setValue(thisRef: Any?, property: KProperty<*>, value: V) {\n        val oldValue = this.value\n        if (!beforeChange(property, oldValue, value)) {\n            return\n        }\n        this.value = value\n        afterChange(property, oldValue, value)\n    }\n}"/**\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@file:Suppress("PackageDirectoryMismatch")\npackage kotlin\n\nimport kotlin.reflect.*\n\n/**\n * An extension operator that allows delegating a read-only property of type [V]\n * to a property reference to a property of type [V] or its subtype.\n *\n * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.\n * The reference is without a receiver, i.e. it either references a top-level property or\n * has the receiver bound to it.\n *\n * Example:\n *\n * ```\n * class Login(val username: String)\n * val defaultLogin = Login("Admin")\n * val defaultUsername by defaultLogin::username\n * // equivalent to\n * val defaultUserName get() = defaultLogin.username\n * ```\n *\n * @SinceKotlin("1.4")\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V> KProperty0<V>.getValue(thisRef: Any?, property: KProperty<*>): V {\n    return get()\n}\n\n/**\n * An extension operator that allows delegating a mutable property of type [V]\n * to a property reference to a mutable property of the same type [V].\n *\n * @receiver A property reference to a mutable property of type [V].\n * The reference is without a receiver, i.e. it either references a top-level property or\n * has the receiver bound to it.\n *\n * Example:\n *\n * ```\n * class Login(val username: String, var incorrectAttemptCounter: Int = 0)\n * val defaultLogin = Login("Admin")\n * var defaultLoginAttempts by defaultLogin::incorrectAttemptCounter\n * // equivalent to\n * var defaultLoginAttempts: Int\n * get() = defaultLogin.incorrectAttemptCounter\n * set(value) {\n *     defaultLogin.incorrectAttemptCounter = value\n * }\n * ```\n *\n * @SinceKotlin("1.4")\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <V> KMutableProperty0<V>.setValue(thisRef: Any?, property: KProperty<*>, value: V) {\n    set(value)\n}\n\n/**\n * An extension operator that allows delegating a read-only member or extension property of type [V]\n * to a property reference to a member or extension property of type [V] or its subtype.\n *\n * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.\n * The reference has an unbound receiver of type [T].\n *\n * Example:\n *\n * ```\n * class Login(val username: String)\n * val Login.user by Login::username\n * // equivalent to\n * val Login.user get() = this.username\n * ```\n *\n * @SinceKotlin("1.4")\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T, V> KProperty1<T, V>.getValue(thisRef: T, property: KProperty<*>): V {\n    return get(thisRef)\n}\n\n/**\n * An extension operator that allows delegating a mutable member or extension property of type [V]\n * to a property reference to a member or extension mutable property of the same type [V].\n *\n * @receiver A property reference to a read-only or mutable property of type [V] or its subtype.\n * The reference has an unbound receiver of type [T].\n *\n * Example:\n *\n * ```\n * class Login(val username: String, var incorrectAttemptCounter: Int)\n * var Login.attempts by Login::incorrectAttemptCounter\n * // equivalent to\n * var Login.attempts: Int\n * get() = this.incorrectAttemptCounter\n * set(value) {\n *     this.incorrectAttemptCounter = value\n * }\n * ```\n *\n * @SinceKotlin("1.4")\n */\n@kotlin.internal.InlineOnly\npublic inline operator fun <T, V> KMutableProperty1<T, V>.setValue(thisRef: T, property: KProperty<*>, value: V) {\n    set(thisRef, value)\n}"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.random\n\nimport

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kotlin.math.nextDown\n\n/**\n * An abstract class that is implemented by random number generator algorithms.\n *\n * The companion object [Random.Default] is the default instance of [Random].\n *\n * To get a seeded instance of random generator use [Random] function.\n *\n * @sample samples.random.Randoms.defaultRandom\n */\n@SinceKotlin("1.3")\npublic abstract class Random {\n\n    /**\n     * Gets the next random [bitCount] number of bits.\n     *\n     * Generates an `Int` whose lower [bitCount] bits are filled with random values and the remaining upper bits are zero.\n     *\n     * @param bitCount number of bits to generate, must be in range 0..32, otherwise the behavior is unspecified.\n     *\n     * @sample samples.random.Randoms.nextBits\n     */\n    public abstract fun nextBits(bitCount: Int): Int\n\n    /**\n     * Gets the next random `Int` from the random number generator.\n     *\n     * Generates an `Int` random value uniformly distributed between `Int.MIN_VALUE` and `Int.MAX_VALUE` (inclusive).\n     *\n     * @sample samples.random.Randoms.nextInt\n     */\n    public open fun nextInt(): Int = nextBits(32)\n\n    /**\n     * Gets the next random non-negative `Int` from the random number generator less than the specified [until] bound.\n     *\n     * Generates an `Int` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n     *\n     * @param until must be positive.\n     *\n     * @throws IllegalArgumentException if [until] is negative or zero.\n     *\n     * @sample samples.random.Randoms.nextIntFromUntil\n     */\n    public open fun nextInt(until: Int): Int = nextInt(0, until)\n\n    /**\n     * Gets the next random `Int` from the random number generator in the specified range.\n     *\n     * Generates an `Int` random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n     *\n     * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n     *\n     * @sample samples.random.Randoms.nextIntFromUntil\n     */\n    public open fun nextInt(from: Int, until: Int): Int {\n        checkRangeBounds(from, until)\n        val n = until - from\n        if (n > 0 || n == Int.MIN_VALUE)\n        {\n            val rnd = if (n and -n == n) {\n                val bitCount = fastLog2(n)\n                nextBits(bitCount)\n            } else {\n                var v: Int\n                do {\n                    val bits = nextInt().ushr(1)\n                    v = bits % n\n                } while (bits - v + (n - 1) < 0)\n                v\n            }\n            return from + rnd\n        } else {\n            while (true) {\n                val rnd = nextInt()\n                if (rnd in from until until) return rnd\n            }\n        }\n    }\n\n    /**\n     * Gets the next random `Long` from the random number generator.\n     *\n     * Generates a `Long` random value uniformly distributed between `Long.MIN_VALUE` and `Long.MAX_VALUE` (inclusive).\n     *\n     * @sample samples.random.Randoms.nextLong\n     */\n    public open fun nextLong(): Long = nextInt().toLong().shl(32) + nextInt()\n\n    /**\n     * Gets the next random non-negative `Long` from the random number generator less than the specified [until] bound.\n     *\n     * Generates a `Long` random value uniformly distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n     *\n     * @param until must be positive.\n     *\n     * @throws IllegalArgumentException if [until] is negative or zero.\n     *\n     * @sample samples.random.Randoms.nextLongFromUntil\n     */\n    public open fun nextLong(until: Long): Long = nextLong(0, until)\n\n    /**\n     * Gets the next random `Long` from the random number generator in the specified range.\n     *\n     * Generates a `Long` random value uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n     *\n     * @throws IllegalArgumentException if [from] is greater than or equal to [until].\n     *\n     * @sample samples.random.Randoms.nextLongFromUntil\n     */\n    public open fun nextLong(from: Long, until: Long): Long {\n        checkRangeBounds(from, until)\n        val n = until - from\n        if (n > 0) {\n            val rnd: Long\n            if (n and -n == n) {\n                val nLow = n.toInt()\n                val nHigh = (n ushr 32).toInt()\n                rnd = when {\n                    nLow != 0 -> {\n                        val bitCount = fastLog2(nLow)\n                        // toUInt().toLong()\n                        nextBits(bitCount).toLong() and 0xFFFF_FFFF\n                    }\n                    nHigh == 1 -> {\n                        // toUInt().toLong()\n                        nextInt().toLong() and 0xFFFF_FFFF\n                    }\n                    else -> {\n                        val bitCount = fastLog2(nHigh)\n                        nextBits(bitCount).toLong().shl(32) + (nextInt().toLong() and 0xFFFF_FFFF)\n                    }\n                }\n            } else {\n                var v: Long\n                do {\n                    val bits = nextLong().ushr(1)\n                    v = bits % n\n                } while (bits - v + (n - 1) < 0)\n                rnd = v\n            }\n            return from + rnd\n        } else {\n            while (true) {\n                val rnd = nextLong()\n                if (rnd in from until until) return rnd\n            }\n        }\n    }\n\n    /**\n     * Gets the next random [Boolean] value.\n     *\n     * @sample samples.random.Randoms.nextBoolean\n     */\n    public open fun nextBoolean(): Boolean = nextBits(1) != 0\n}

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/**\n * Gets the next random [Double] value uniformly distributed between 0 (inclusive) and 1 (exclusive).\n
*\n * @sample samples.random.Randoms.nextDouble\n */\n public open fun nextDouble(): Double =
doubleFromParts(nextBits(26), nextBits(27))\n\n /**\n * Gets the next random non-negative `Double` from the
random number generator less than the specified [until] bound.\n *\n * Generates a `Double` random value
uniformly distributed between 0 (inclusive) and [until] (exclusive).\n *\n * @throws IllegalArgumentException
if [until] is negative or zero.\n *\n * @sample samples.random.Randoms.nextDoubleFromUntil\n */\n
public open fun nextDouble(until: Double): Double = nextDouble(0.0, until)\n\n /**\n * Gets the next random
`Double` from the random number generator in the specified range.\n *\n * Generates a `Double` random value
uniformly distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n *\n * [from]
and [until] must be finite otherwise the behavior is unspecified.\n *\n * @throws IllegalArgumentException if
[from] is greater than or equal to [until].\n *\n * @sample samples.random.Randoms.nextDoubleFromUntil\n
*/\n public open fun nextDouble(from: Double, until: Double): Double {\n    checkRangeBounds(from, until)\n
    val size = until - from\n    val r = if (size.isInfinite() && from.isFinite() && until.isFinite()) {\n        val r1 =
nextDouble() * (until / 2 - from / 2)\n        from + r1 + r1\n    } else {\n        from + nextDouble() * size\n
    }\n    return if (r >= until) until.nextDown() else r\n }\n\n /**\n * Gets the next random [Float] value
uniformly distributed between 0 (inclusive) and 1 (exclusive).\n *\n * @sample
samples.random.Randoms.nextFloat\n */\n public open fun nextFloat(): Float = nextBits(24) / (1 shl
24).toFloat()\n\n /**\n * Fills a subrange of the specified byte [array] starting from [fromIndex] inclusive and
ending [toIndex] exclusive\n * with random bytes.\n *\n * @return [array] with the subrange filled with
random bytes.\n *\n * @sample samples.random.Randoms.nextBytes\n */\n public open fun
nextBytes(array: ByteArray, fromIndex: Int = 0, toIndex: Int = array.size): ByteArray {\n    require(fromIndex in
0..array.size && toIndex in 0..array.size) { "\"fromIndex ($fromIndex) or toIndex ($toIndex) are out of range:
0..${array.size}." }\n    require(fromIndex <= toIndex) { "\"fromIndex ($fromIndex) must be not greater than
toIndex ($toIndex).\" }\n    val steps = (toIndex - fromIndex) / 4\n    var position = fromIndex\n    repeat(steps) {\n        val v = nextInt()\n        array[position] = v.toByte()\n        array[position + 1] =
v.ushr(8).toByte()\n        array[position + 2] = v.ushr(16).toByte()\n        array[position + 3] =
v.ushr(24).toByte()\n        position += 4\n    }\n    val remainder = toIndex - position\n    val vr =
nextBits(remainder * 8)\n    for (i in 0 until remainder) {\n        array[position + i] = vr.ushr(i * 8).toByte()\n
    }\n    return array\n }\n\n /**\n * Fills the specified byte [array] with random bytes and returns it.\n *\n
* @return [array] filled with random bytes.\n *\n * @sample samples.random.Randoms.nextBytes\n */\n
public open fun nextBytes(array: ByteArray): ByteArray = nextBytes(array, 0, array.size)\n\n /**\n * Creates a
byte array of the specified [size], filled with random bytes.\n *\n * @sample
samples.random.Randoms.nextBytes\n */\n public open fun nextBytes(size: Int): ByteArray =
nextBytes(ByteArray(size))\n\n /**\n * The default random number generator.\n *\n * On JVM this
generator is thread-safe, its methods can be invoked from multiple threads.\n *\n * @sample
samples.random.Randoms.defaultRandom\n */\n companion object Default : Random(), Serializable {\n
private val defaultRandom: Random = defaultPlatformRandom()\n    private object Serialized : Serializable {\n
        private const val serialVersionUID = 0L\n        private fun readResolve(): Any = Random\n    }\n\n    private fun writeReplace(): Any = Serialized\n\n    override fun nextBits(bitCount: Int): Int =
defaultRandom.nextBits(bitCount)\n    override fun nextInt(): Int = defaultRandom.nextInt()\n    override fun
nextInt(until: Int): Int = defaultRandom.nextInt(until)\n    override fun nextInt(from: Int, until: Int): Int =
defaultRandom.nextInt(from, until)\n\n    override fun nextLong(): Long = defaultRandom.nextLong()\n
override fun nextLong(until: Long): Long = defaultRandom.nextLong(until)\n    override fun nextLong(from:
Long, until: Long): Long = defaultRandom.nextLong(from, until)\n\n    override fun nextBoolean(): Boolean =
defaultRandom.nextBoolean()\n\n    override fun nextDouble(): Double = defaultRandom.nextDouble()\n
override fun nextDouble(until: Double): Double = defaultRandom.nextDouble(until)\n    override fun
nextDouble(from: Double, until: Double): Double = defaultRandom.nextDouble(from, until)\n\n    override fun
nextFloat(): Float = defaultRandom.nextFloat()\n\n    override fun nextBytes(array: ByteArray): ByteArray =

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defaultRandom.nextBytes(array)\n    override fun nextBytes(size: Int): ByteArray =
defaultRandom.nextBytes(size)\n    override fun nextBytes(array: ByteArray, fromIndex: Int, toIndex: Int):
ByteArray =\n    defaultRandom.nextBytes(array, fromIndex, toIndex)\n    } }\n\n/**\n * Returns a repeatable
random number generator seeded with the given [seed] `Int` value.\n *\n * Two generators with the same seed
produce the same sequence of values within the same version of Kotlin runtime.\n *\n * *Note:* Future versions of
Kotlin may change the algorithm of this seeded number generator so that it will return\n * a sequence of values
different from the current one for a given seed.\n *\n * On JVM the returned generator is NOT thread-safe. Do not
invoke it from multiple threads without proper synchronization.\n *\n * @sample
samples.random.Randoms.seededRandom\n *\n@SinceKotlin("1.3")\npublic fun Random(seed: Int): Random =
XorWowRandom(seed, seed.shr(31))\n\n/**\n * Returns a repeatable random number generator seeded with the
given [seed] `Long` value.\n *\n * Two generators with the same seed produce the same sequence of values within
the same version of Kotlin runtime.\n *\n * *Note:* Future versions of Kotlin may change the algorithm of this
seeded number generator so that it will return\n * a sequence of values different from the current one for a given
seed.\n *\n * On JVM the returned generator is NOT thread-safe. Do not invoke it from multiple threads without
proper synchronization.\n *\n * @sample samples.random.Randoms.seededRandom\n
*\n@SinceKotlin("1.3")\npublic fun Random(seed: Long): Random = XorWowRandom(seed.toInt(),
seed.shr(32).toInt())\n\n/**\n * Gets the next random `Int` from the random number generator in the specified
[range].\n *\n * Generates an `Int` random value uniformly distributed in the specified [range]:\n * from `range.start`
inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is empty.\n
*\n@SinceKotlin("1.3")\npublic fun Random.nextInt(range: IntRange): Int = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last < Int.MAX_VALUE ->
nextInt(range.first, range.last + 1)\n    range.first > Int.MIN_VALUE -> nextInt(range.first - 1, range.last) + 1\n
else -> nextInt()\n}\n\n/**\n * Gets the next random `Long` from the random number generator in the specified
[range].\n *\n * Generates a `Long` random value uniformly distributed in the specified [range]:\n * from
`range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range] is
empty.\n *\n@SinceKotlin("1.3")\npublic fun Random.nextLong(range: LongRange): Long = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last <
Long.MAX_VALUE -> nextLong(range.first, range.last + 1)\n    range.first > Long.MIN_VALUE ->
nextLong(range.first - 1, range.last) + 1\n    else -> nextLong()\n}\n\n\ninternal expect fun
defaultPlatformRandom(): Random\n\ninternal expect fun doubleFromParts(hi26: Int, low27: Int): Double\n\ninternal
fun fastLog2(value: Int): Int = 31 - value.countLeadingZeroBits()\n\n/**\n * Takes upper [bitCount] bits (0..32) from
this number. *\n\ninternal fun Int.takeUpperBits(bitCount: Int): Int =\n    this.ushr(32 - bitCount) and (-
bitCount).shr(31)\n\ninternal fun checkRangeBounds(from: Int, until: Int) = require(until > from) {\n
    boundsErrorMessage(from, until) }\n\ninternal fun checkRangeBounds(from: Long, until: Long) = require(until >
from) {\n    boundsErrorMessage(from, until) }\n\ninternal fun checkRangeBounds(from: Double, until: Double) =
require(until > from) {\n    boundsErrorMessage(from, until) }\n\ninternal fun boundsErrorMessage(from: Any, until:
Any) = "Random range is empty: [$from, $until].\n", /*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n@package kotlin.random\n\n/**\n * Gets the next random [UInt]
from the random number generator.\n *\n * Generates a [UInt] random value uniformly distributed between
[UInt.MIN_VALUE] and [UInt.MAX_VALUE] (inclusive).\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextUInt(): UInt = nextInt().toUInt()\n\n/**\n * Gets the next random [UInt] from the random number
generator less than the specified [until] bound.\n *\n * Generates a [UInt] random value uniformly distributed
between `0` (inclusive) and the specified [until] bound (exclusive).\n *\n * @throws IllegalArgumentException if
[until] is zero.\n *\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextUInt(until: UInt): UInt = nextUInt(0u, until)\n\n/**\n * Gets the next random [UInt] from the random
number generator in the specified range.\n *\n * Generates a [UInt] random value uniformly distributed between the

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specified [from] (inclusive) and [until] (exclusive) bounds.\n *\n * @throws IllegalArgumentException if [from] is
greater than or equal to [until].\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextIntUInt(from: UInt, until: UInt): UInt {\n    checkUIntRangeBounds(from, until)\n\n    val signedFrom =
from.toInt() xor Int.MIN_VALUE\n    val signedUntil = until.toInt() xor Int.MIN_VALUE\n\n    val signedResult =
nextInt(signedFrom, signedUntil) xor Int.MIN_VALUE\n    return signedResult.toUInt()\n}\n\n/**\n * Gets the next
random [UInt] from the random number generator in the specified [range].\n *\n * Generates a [UInt] random value
uniformly distributed in the specified [range]:\n * from `range.start` inclusive to `range.endInclusive` inclusive.\n
*\n * @throws IllegalArgumentException if [range] is empty.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextIntUInt(range: UIntRange): UInt = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last < UInt.MAX_VALUE ->
nextIntUInt(range.first, range.last + 1u)\n    range.first > UInt.MIN_VALUE -> nextUInt(range.first - 1u, range.last) +
1u\n    else -> nextUInt()\n}\n\n/**\n * Gets the next random [ULong] from the random number generator.\n *\n *
Generates a [ULong] random value uniformly distributed between [ULong.MIN_VALUE] and
[ULong.MAX_VALUE] (inclusive).\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextULong(): ULong = nextLong().toULong()\n\n/**\n * Gets the next random [ULong] from the random
number generator less than the specified [until] bound.\n *\n * Generates a [ULong] random value uniformly
distributed between `0` (inclusive) and the specified [until] bound (exclusive).\n *\n * @throws
IllegalArgumentException if [until] is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextULong(until: ULong): ULong = nextULong(0uL, until)\n\n/**\n * Gets the next random [ULong] from
the random number generator in the specified range.\n *\n * Generates a [ULong] random value uniformly
distributed between the specified [from] (inclusive) and [until] (exclusive) bounds.\n *\n * @throws
IllegalArgumentException if [from] is greater than or equal to [until].\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextULong(from: ULong, until: ULong): ULong {\n    checkULongRangeBounds(from, until)\n\n    val
signedFrom = from.toLong() xor Long.MIN_VALUE\n    val signedUntil = until.toLong() xor
Long.MIN_VALUE\n\n    val signedResult = nextLong(signedFrom, signedUntil) xor Long.MIN_VALUE\n\n    return
signedResult.toULong()\n}\n\n/**\n * Gets the next random [ULong] from the random number generator in
the specified [range].\n *\n * Generates a [ULong] random value uniformly distributed in the specified [range]:\n *
from `range.start` inclusive to `range.endInclusive` inclusive.\n *\n * @throws IllegalArgumentException if [range]
is empty.\n *\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
Random.nextULong(range: ULongRange): ULong = when {\n    range.isEmpty() -> throw
IllegalArgumentException("Cannot get random in empty range: $range")\n    range.last < ULong.MAX_VALUE -
> nextULong(range.first, range.last + 1u)\n    range.first > ULong.MIN_VALUE -> nextULong(range.first - 1u,
range.last) + 1u\n    else -> nextULong()\n}\n\n/**\n * Fills the specified unsigned byte [array] with random bytes
and returns it.\n *\n * @return [array] filled with random bytes.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUBytes(array: UByteArray):
UByteArray {\n    nextBytes(array.asByteArray())\n    return array\n}\n\n/**\n * Creates an unsigned byte array of
the specified [size], filled with random bytes.\n *\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic
fun Random.nextUBytes(size: Int): UByteArray = nextBytes(size).asUByteArray()\n\n/**\n * Fills a subrange of the
specified `UByte` [array] starting from [fromIndex] inclusive and ending [toIndex] exclusive with random
UBytes.\n *\n * @return [array] with the subrange filled with random bytes.\n
*\n@SinceKotlin("1.3")\n@ExperimentalUnsignedTypes\npublic fun Random.nextUBytes(array: UByteArray,
fromIndex: Int = 0, toIndex: Int = array.size): UByteArray {\n    nextBytes(array.asByteArray(), fromIndex,
toIndex)\n    return array\n}\n\n\ninternal fun checkUIntRangeBounds(from: UInt, until: UInt) = require(until >

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\The projection variance $variance requires type to be specified.\n    }\n }\n\n override fun toString():
String = when (variance) {\n    null -> \n\n    KVariance.INVARIANT -> type.toString()\n
KVariance.IN -> \n\n    KVariance.OUT -> \n\n    }\n\n public companion object {\n //
provided for compiler access\n    @JvmField\n    @PublishedApi\n    internal val star: KTypeProjection =
KTypeProjection(null, null)\n\n    /**\n     * Star projection, denoted by the `*` character.\n     * For example,
in the type `KClass<*>`, `*` is the star projection.\n     * See the [Kotlin language
documentation](https://kotlinlang.org/docs/reference/generics.html#star-projections)\n     * for more
information.\n     */\n    public val STAR: KTypeProjection get() = star\n\n    /**\n     * Creates an
invariant projection of a given type. Invariant projection is just the type itself,\n     * without any use-site variance
modifiers applied to it.\n     * For example, in the type `Set<String>`, `String` is an invariant projection of the type
represented by the class `String`.\n     */\n    @JvmStatic\n    public fun invariant(type: KType):
KTypeProjection =\n        KTypeProjection(KVariance.INVARIANT, type)\n\n    /**\n     * Creates a
contravariant projection of a given type, denoted by the `in` modifier applied to a type.\n     * For example, in the
type `MutableList<in Number>`, `in Number` is a contravariant projection of the type of class `Number`.\n     */\n
    @JvmStatic\n    public fun contravariant(type: KType): KTypeProjection =\n
KTypeProjection(KVariance.IN, type)\n\n    /**\n     * Creates a covariant projection of a given type, denoted
by the `out` modifier applied to a type.\n     * For example, in the type `Array<out Number>`, `out Number` is a
covariant projection of the type of class `Number`.\n     */\n    @JvmStatic\n    public fun covariant(type:
KType): KTypeProjection =\n        KTypeProjection(KVariance.OUT, type)\n    }\n\n    /**\n     * Copyright 2010-
2019 JetBrains s.r.o. and Kotlin Programming Language contributors.\n     * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n     */\n\npackage kotlin.reflect\n\n/**\n *
Represents variance applied to a type parameter on the declaration site (*declaration-site variance*),\n * or to a type
in a projection (*use-site variance*).\n *\n * See the [Kotlin language
documentation](https://kotlinlang.org/docs/reference/generics.html#variance)\n * for more information.\n *\n *
@see [KTypeParameter.variance]\n * @see [KTypeProjection]\n */\n\n@SinceKotlin("1.1")\nenum class KVariance
{\n    /**\n     * The affected type parameter or type is *invariant*, which means it has no variance applied to it.\n
*/\n    INVARIANT,\n\n    /**\n     * The affected type parameter or type is *contravariant*. Denoted by the `in`
modifier in the source code.\n     */\n    IN,\n\n    /**\n     * The affected type parameter or type is *covariant*.
Denoted by the `out` modifier in the source code.\n     */\n    OUT,\n\n    /**\n     * Copyright 2010-2019 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n     * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n     */\n\npackage kotlin.reflect\n\n/**\n * Returns a runtime
representation of the given reified type [T] as an instance of [KType].\n *\n * Note that on JVM, the created type has
no annotations ([KType.annotations] returns an empty list)\n * even if the type in the source code is annotated.
Support for type annotations might be added in a future version.\n *\n *
@SinceKotlin("1.6")\n * @WasExperimental(ExperimentalStdlibApi::class)\n */\npublic inline fun <reified T>
typeOf(): KType =\n    throw UnsupportedOperationException("This function is implemented as an intrinsic on all
supported platforms.")\n\n    /**\n     * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n     * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n     */\n\n@file:kotlin.jvm.JvmMultifileClass\n@file:kotlin.jvm.JvmName("StringsKt")\n\npackage
kotlin.text\n\n/**\n * An object to which char sequences and values can be appended.\n */\n\nexpect interface
Appendable {\n    /**\n     * Appends the specified character [value] to this Appendable and returns this instance.\n
*/\n     * @param value the character to append.\n     */\n    fun append(value: Char): Appendable\n\n    /**\n     *
Appends the specified character sequence [value] to this Appendable and returns this instance.\n     *\n     * @param
value the character sequence to append. If [value] is `null`, then the four characters `null` are appended to this
Appendable.\n     */\n    fun append(value: CharSequence?): Appendable\n\n    /**\n     * Appends a subsequence of
the specified character sequence [value] to this Appendable and returns this instance.\n     *\n     * @param value the
character sequence from which a subsequence is appended. If [value] is `null`,\n     * then characters are appended

```



```

String.trimIndent(): String = replaceIndent("\\n")\n\n/**\n * Detects a common minimal indent like it does
[trimIndent] and replaces it with the specified [newIndent].\n */\npublic fun String.replaceIndent(newIndent: String
= "\\n"): String {\n    val lines = lines()\n    val minCommonIndent = lines\n        .filter(String::isNotBlank)\n        .map(String::indentWidth)\n        .minOrNull() ?: 0\n    return lines.reindent(length + newIndent.length *
lines.size, getIndentFunction(newIndent), { line -> line.drop(minCommonIndent) })\n}\n\n/**\n * Prepends [indent]
to every line of the original string.\n */\npublic fun
String.prependIndent(indent: String = "\\n"): String =\n    lineSequence()\n        .map {\n            when {\n
it.isBlank() -> {\n                when {\n                    it.length < indent.length -> indent\n                        else -> it\n
                }\n            }\n            else -> indent + it\n        }\n    }.joinToString("\\n")\n\nprivate fun
String.indentWidth(): Int = indexOfFirst { !it.isWhitespace() }.let { if (it == -1) length else it }\n\nprivate fun
getIndentFunction(indent: String) = when {\n    indent.isEmpty() -> { line: String -> line }\n    else -> { line: String -
> indent + line }\n}\n\nprivate inline fun List<String>.reindent(\n    resultSizeEstimate: Int,\n    indentAddFunction:
(String) -> String,\n    indentCutFunction: (String) -> String?): String {\n    val lastIndex = lastIndex\n    return
mapIndexedNotNull { index, value ->\n        if ((index == 0 || index == lastIndex) && value.isBlank())\n            null\n        else\n            indentCutFunction(value)?.let(indentAddFunction) ?: value\n    }\n}.joinTo(StringBuilder(resultSizeEstimate), "\\n")\n    .toString()\n}\n\n"/\n\n * Copyright 2010-2018 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/**\n * Defines names for
Unicode symbols used in proper Typography.\n */\npublic object Typography {\n    /** The character &#x22;
\u2013 quotation mark */\n    public const val quote: Char = "\u0022"\n    /** The character &#x24; \u2013 dollar
sign */\n    public const val dollar: Char = "\u0024"\n    /** The character &#x26; \u2013 ampersand */\n    public
const val amp: Char = "\u0026"\n    /** The character &#x3C; \u2013 less-than sign */\n    public const val less:
Char = "\u003C"\n    /** The character &#x3E; \u2013 greater-than sign */\n    public const val greater: Char =
"\u003E"\n    /** The non-breaking space character */\n    public const val nbsp: Char = "\u00A0"\n    /** The
character &#xD7; */\n    public const val times: Char = "\u00D7"\n    /** The character &#xA2; */\n    public const
val cent: Char = "\u00A2"\n    /** The character &#xA3; */\n    public const val pound: Char = "\u00A3"\n    /** The
character &#xA7; */\n    public const val section: Char = "\u00A7"\n    /** The character &#xA9; */\n    public const
val copyright: Char = "\u00A9"\n    /** The character &#xAB; */\n    @SinceKotlin("1.6")\n    public const val
leftGuillemet: Char = "\u00AB"\n    /** The character &#xBB; */\n    @SinceKotlin("1.6")\n    public const val
rightGuillemet: Char = "\u00BB"\n    /** The character &#xAE; */\n    public const val registered: Char =
"\u00AE"\n    /** The character &#xB0; */\n    public const val degree: Char = "\u00B0"\n    /** The character
&#xB1; */\n    public const val plusMinus: Char = "\u00B1"\n    /** The character &#xB6; */\n    public const val
paragraph: Char = "\u00B6"\n    /** The character &#xB7; */\n    public const val middleDot: Char = "\u00B7"\n
/** The character &#xBD; */\n    public const val half: Char = "\u00BD"\n    /** The character &#x2013; */\n
public const val ndash: Char = "\u2013"\n    /** The character &#x2014; */\n    public const val mdash: Char =
"\u2014"\n    /** The character &#x2018; */\n    public const val leftSingleQuote: Char = "\u2018"\n    /** The
character &#x2019; */\n    public const val rightSingleQuote: Char = "\u2019"\n    /** The character &#x201A; */\n
public const val lowSingleQuote: Char = "\u201A"\n    /** The character &#x201C; */\n    public const val
leftDoubleQuote: Char = "\u201C"\n    /** The character &#x201D; */\n    public const val rightDoubleQuote: Char
= "\u201D"\n    /** The character &#x201E; */\n    public const val lowDoubleQuote: Char = "\u201E"\n    /** The
character &#x2020; */\n    public const val dagger: Char = "\u2020"\n    /** The character &#x2021; */\n    public
const val doubleDagger: Char = "\u2021"\n    /** The character &#x2022; */\n    public const val bullet: Char =
"\u2022"\n    /** The character &#x2026; */\n    public const val ellipsis: Char = "\u2026"\n    /** The character
&#x2032; */\n    public const val prime: Char = "\u2032"\n    /** The character &#x2033; */\n    public const val
doublePrime: Char = "\u2033"\n    /** The character &#x20AC; */\n    public const val euro: Char = "\u20AC"\n
/** The character &#x2122; */\n    public const val tm: Char = "\u2122"\n    /** The character &#x2248; */\n
public const val almostEqual: Char = "\u2248"\n    /** The character &#x2260; */\n    public const val notEqual:
Char = "\u2260"\n    /** The character &#x2264; */\n    public const val lessOrEqual: Char = "\u2264"\n    /** The

```

```

character &#x2265; *\n public const val greaterOrEqual: Char = "\u2265\n" /** The character &#xAB; *\n
@Deprecated("This constant has a typo in the name. Use leftGuillemet instead."),
ReplaceWith("Typography.leftGuillemet("))\n @DeprecatedSinceKotlin("1.6")\n public const val
leftGuillemete: Char = "\u00AB\n" /** The character &#xBB; *\n @Deprecated("This constant has a typo in
the name. Use rightGuillemet instead."), ReplaceWith("Typography.rightGuillemet("))\n
@DeprecatedSinceKotlin("1.6")\n public const val rightGuillemete: Char = "\u00BB\n"/**\n * Copyright
2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.text\n\n/**\n *
Represents a collection of captured groups in a single match of a regular expression.\n *\n * This collection has size
of `groupCount + 1` where `groupCount` is the count of groups in the regular expression.\n *\n * Groups are indexed
from 1 to `groupCount` and group with the index 0 corresponds to the entire match.\n *\n * An element of the
collection at the particular index can be `null`,\n *\n * if the corresponding group in the regular expression is optional
and\n *\n * there was no match captured by that group.\n */\n\npublic interface MatchGroupCollection :
Collection<MatchGroup?> {\n\n /** Returns a group with the specified [index].\n *\n * @return An instance
of [MatchGroup] if the group with the specified [index] was matched or `null` otherwise.\n *\n * Groups are
indexed from 1 to the count of groups in the regular expression. A group with the index 0\n *\n * corresponds to the
entire match.\n */\n\n public operator fun get(index: Int): MatchGroup?\n}\n\n/**\n * Extends
[MatchGroupCollection] by introducing a way to get matched groups by name, when regex supports it.\n
*/\n\n@SinceKotlin("1.1")\n\npublic interface MatchNamedGroupCollection : MatchGroupCollection {\n /**\n *
Returns a named group with the specified [name].\n *\n * @return An instance of [MatchGroup] if the group with the
specified [name] was matched or `null` otherwise.\n *\n * @throws IllegalArgumentException if there is no group
with the specified [name] defined in the regex pattern.\n *\n * @throws UnsupportedOperationException if getting
named groups isn't supported on the current platform.\n */\n\n public operator fun get(name: String):
MatchGroup?\n}\n\n/**\n * Represents the results from a single regular expression match.\n */\n\npublic interface
MatchResult {\n /** The range of indices in the original string where match was captured. *\n public val range:
IntRange\n /** The substring from the input string captured by this match. *\n public val value: String\n /**\n *
A collection of groups matched by the regular expression.\n *\n * This collection has size of `groupCount +
1` where `groupCount` is the count of groups in the regular expression.\n *\n * Groups are indexed from 1 to
`groupCount` and group with the index 0 corresponds to the entire match.\n */\n\n public val groups:
MatchGroupCollection\n /**\n * A list of matched indexed group values.\n *\n * This list has size of
`groupCount + 1` where `groupCount` is the count of groups in the regular expression.\n *\n * Groups are indexed
from 1 to `groupCount` and group with the index 0 corresponds to the entire match.\n *\n * If the group in the
regular expression is optional and there were no match captured by that group,\n *\n * corresponding item in
[groupValues] is an empty string.\n *\n * @sample
samples.text.Regexps.matchDestructuringToGroupValues\n */\n\n public val groupValues: List<String>\n\n
/**\n * An instance of [MatchResult.Destructured] wrapper providing components for destructuring assignment
of group values.\n *\n * component1 corresponds to the value of the first group, component2 \u2014 of the
second, and so on.\n *\n * @sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n\n
public val destructured: Destructured get() = Destructured(this)\n\n /** Returns a new [MatchResult] with the
results for the next match, starting at the position\n *\n * at which the last match ended (at the character after the last
matched character).\n */\n\n public fun next(): MatchResult?\n\n /**\n * Provides components for
destructuring assignment of group values.\n *\n * [component1] corresponds to the value of the first group,
[component2] \u2014 of the second, and so on.\n *\n * If the group in the regular expression is optional and
there were no match captured by that group,\n *\n * corresponding component value is an empty string.\n *\n *
@sample samples.text.Regexps.matchDestructuringToGroupValues\n */\n\n public class Destructured internal
constructor(public val match: MatchResult) {\n\n @kotlin.internal.InlineOnly\n\n public operator inline fun
component1(): String = match.groupValues[1]\n\n @kotlin.internal.InlineOnly\n\n public operator inline fun
component2(): String = match.groupValues[2]\n\n @kotlin.internal.InlineOnly\n\n public operator inline fun

```

```

component3(): String = match.groupValues[3]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component4(): String = match.groupValues[4]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component5(): String = match.groupValues[5]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component6(): String = match.groupValues[6]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component7(): String = match.groupValues[7]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component8(): String = match.groupValues[8]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component9(): String = match.groupValues[9]\n    @kotlin.internal.InlineOnly\n    public operator inline fun
component10(): String = match.groupValues[10]\n\n    /**\n     * Returns destructured group values as a list of
strings.\n     * First value in the returned list corresponds to the value of the first group, and so on.\n     *\n     * @sample samples.text.Regexps.matchDestructuringToGroupValues\n     */\n    public fun toList():
List<String> = match.groupValues.subList(1, match.groupValues.size)\n    }\n}", /*\n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmMultifileClass()\n@file:kotlin.jvm.JvmName("DurationUnitKt")\n\npackage
kotlin.time\n\n/**\n * The list of possible time measurement units, in which a duration can be expressed.\n *\n *
The smallest time unit is [NANOSECONDS] and the largest is [DAYS], which corresponds to exactly 24
[HOURS].\n *\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalTime::class)\npublic expect enum class
DurationUnit {\n    /**\n     * Time unit representing one nanosecond, which is 1/1000 of a microsecond.\n     *\n
NANOSECONDS,\n    /**\n     * Time unit representing one microsecond, which is 1/1000 of a millisecond.\n     *\n
MICROSECONDS,\n    /**\n     * Time unit representing one millisecond, which is 1/1000 of a second.\n     *\n
MILLISECONDS,\n    /**\n     * Time unit representing one second.\n     *\n    SECONDS,\n    /**\n     *
Time unit representing one minute.\n     *\n    MINUTES,\n    /**\n     * Time unit representing one hour.\n     *\n
HOURS,\n    /**\n     * Time unit representing one day, which is always equal to 24 hours.\n     *\n
DAYS;\n}\n\n/**\n * Converts the given time duration [value] expressed in the specified [sourceUnit] into the specified
[targetUnit].\n *\n@SinceKotlin("1.3")\ninternal expect fun convertDurationUnit(value: Double, sourceUnit:
DurationUnit, targetUnit: DurationUnit): Double\n\n// overflown result is
unspecified\n@SinceKotlin("1.5")\ninternal expect fun convertDurationUnitOverflow(value: Long, sourceUnit:
DurationUnit, targetUnit: DurationUnit): Long\n\n// overflown result is coerced in the Long range
boundaries\n@SinceKotlin("1.5")\ninternal expect fun convertDurationUnit(value: Long, sourceUnit:
DurationUnit, targetUnit: DurationUnit):
Long\n\n\n@SinceKotlin("1.3")\n@Suppress("REDUNDANT_ELSE_IN_WHEN")\ninternal fun
DurationUnit.shortName(): String = when (this) {\n    DurationUnit.NANOSECONDS -> "ns"\n
DurationUnit.MICROSECONDS -> "us"\n    DurationUnit.MILLISECONDS -> "ms"\n
DurationUnit.SECONDS -> "s"\n    DurationUnit.MINUTES -> "m"\n    DurationUnit.HOURS -> "h"\n
DurationUnit.DAYS -> "d"\n    else -> error("Unknown unit: $this")\n}\n\n@SinceKotlin("1.5")\ninternal fun
durationUnitByShortName(shortName: String): DurationUnit = when (shortName) {\n    "ns" ->
DurationUnit.NANOSECONDS\n    "us" -> DurationUnit.MICROSECONDS\n    "ms" ->
DurationUnit.MILLISECONDS\n    "s" -> DurationUnit.SECONDS\n    "m" -> DurationUnit.MINUTES\n
"h" -> DurationUnit.HOURS\n    "d" -> DurationUnit.DAYS\n    else -> throw
IllegalArgumentException("Unknown duration unit short name:
$shortName")\n}\n\n@SinceKotlin("1.5")\ninternal fun durationUnitByIsoChar(isoChar: Char,
isTimeComponent: Boolean): DurationUnit =\n    when {\n        !isTimeComponent -> {\n            when (isoChar)
{\n                'D' -> DurationUnit.DAYS\n                else -> throw IllegalArgumentException("Invalid or
unsupported duration ISO non-time unit: $isoChar")\n            }\n        }\n        else -> {\n            when (isoChar) {\n
                'H' -> DurationUnit.HOURS\n                'M' -> DurationUnit.MINUTES\n                'S' ->
DurationUnit.SECONDS\n                else -> throw IllegalArgumentException("Invalid duration ISO time unit:
$isoChar")\n            }\n        }\n    }, /*\n * Copyright 2010-2019 JetBrains s.r.o. and Kotlin Programming
Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the

```

license/LICENSE.txt file.

```

package kotlin.time
import kotlin.annotation.AnnotationTarget

This annotation marks the experimental preview of the standard library API for measuring time and working with durations.
> Note that this API is in a preview state and has a very high chance of being changed in the future. Do not use it if you develop a library since your library will become binary incompatible with the future versions of the standard library.
Any usage of a declaration annotated with `@ExperimentalTime` must be accepted either by annotating that usage with the [OptIn] annotation, e.g.
`@OptIn(ExperimentalTime::class)`, or by using the compiler argument `-Xopt-in=kotlin.time.ExperimentalTime`.

@Suppress("DEPRECATION")
@Experimental(level = Experimental.Level.ERROR)
@RequiresOptIn(level = RequiresOptIn.Level.ERROR)
@MustBeDocumented
@Retention(AnnotationRetention.BINARY)
@Target(
    CLASS,
    ANNOTATION_CLASS,
    PROPERTY,
    FIELD,
    LOCAL_VARIABLE,
    VALUE_PARAMETER,
    CONSTRUCTOR,
    FUNCTION,
    PROPERTY_GETTER,
    PROPERTY_SETTER,
    TYPE_ALIAS
)
@SinceKotlin("1.3")
public annotation class ExperimentalTime

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A source of time for measuring time intervals.

The only operation provided by the time source is [markNow]. It returns a [TimeMark], which can be used to query the elapsed time later.

@see [measureTime]
@see [measureTimedValue]

@SinceKotlin("1.3")
@ExperimentalTime
public interface TimeSource {
    /* Marks a point in time on this time source.
    The returned [TimeMark] instance encapsulates the captured time point and allows querying the duration of time interval [elapsed][TimeMark.elapsedNow] from that point.

    public fun markNow(): TimeMark

    /* The most precise time source available in the platform.
    This time source returns its readings from a source of monotonic time when it is available in a target platform, and resorts to a non-monotonic time source otherwise.

    public object Monotonic : TimeSource by MonotonicTimeSource {
        override fun toString(): String = MonotonicTimeSource.toString()
    }

    public companion object {
    }

    /* Represents a time point notched on a particular [TimeSource]. Remains bound to the time source it was taken from and allows querying for the duration of time elapsed from that point (see the function [elapsedNow]).

    @SinceKotlin("1.3")
    @ExperimentalTime
    public abstract class TimeMark {
        /* Returns the amount of time passed from this mark measured with the time source from which this mark was taken.
        Note that the value returned by this function can change on subsequent invocations.

        public abstract fun elapsedNow(): Duration

        /* Returns a time mark on the same time source that is ahead of this time mark by the specified [duration].
        The returned time mark is more _late_ when the [duration] is positive, and more _early_ when the [duration] is negative.

        public open operator fun plus(duration: Duration): TimeMark = AdjustedTimeMark(this, duration)

        /* Returns a time mark on the same time source that is behind this time mark by the specified [duration].
        The returned time mark is more _early_ when the [duration] is positive, and more _late_ when the [duration] is negative.

        public open operator fun minus(duration: Duration): TimeMark = plus(-duration)

        /* Returns true if this time mark has passed according to the time source from which this mark was taken.
        Note that the value returned by this function can change on subsequent invocations.
        If the time source is monotonic, it can change only from `false` to `true`, namely, when the time mark becomes behind the current point of the time source.

        public fun hasPassedNow(): Boolean = !elapsedNow().isNegative()

        /* Returns false if this time mark has not passed according to the time source from which this mark was taken.
        Note that the value returned by this function can change on subsequent invocations.
        If the time source is monotonic, it can change only from `true` to `false`, namely, when the time mark becomes behind the current point of the time source.

        public fun hasNotPassedNow(): Boolean = elapsedNow().isNegative()
    }

    @ExperimentalTime
    @SinceKotlin("1.3")
    @kotlin.internal.InlineOnly
    @Deprecated("Subtracting one TimeMark from another is not a well defined operation because these time marks could have been obtained from the different time sources.", level =

```

```

DeprecationLevel.ERROR\n\n@Suppress("UNUSED_PARAMETER")\npublic inline operator fun
TimeMark.minus(other: TimeMark): Duration = throw Error("Operation is
disallowed.")\n\n@ExperimentalTime\n@SinceKotlin("1.3")\n@kotlin.internal.InlineOnly\n@Deprecated(\n
"Comparing one TimeMark to another is not a well defined operation because these time marks could have been
obtained from the different time sources.")\n    level =
DeprecationLevel.ERROR\n\n@Suppress("UNUSED_PARAMETER")\npublic inline operator fun
TimeMark.compareTo(other: TimeMark): Int = throw Error("Operation is
disallowed.")\n\n\n@ExperimentalTime\nprivate class AdjustedTimeMark(val mark: TimeMark, val adjustment:
Duration) : TimeMark() {\n    override fun elapsedNow(): Duration = mark.elapsedNow() - adjustment\n\n
override fun plus(duration: Duration): TimeMark = AdjustedTimeMark(mark, adjustment + duration)\n}\n"/*\n *
Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin.time\n\n@SinceKotlin("1.3")\n@ExperimentalTime\ninternal expect object MonotonicTimeSource :
TimeSource\n\n/**\n * An abstract class used to implement time sources that return their readings as [Long] values
in the specified [unit].\n * @property unit The unit in which this time source's readings are expressed.\n
*/\n\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic abstract class AbstractLongTimeSource(protected val
unit: DurationUnit) : TimeSource {\n    /**\n     * This protected method should be overridden to return the current
reading of the time source expressed as a [Long] number\n     * in the unit specified by the [unit] property.\n
*/\n\n    protected abstract fun read(): Long\n\n    private class LongTimeMark(private val startedAt: Long, private val
timeSource: AbstractLongTimeSource, private val offset: Duration) : TimeMark() {\n        override fun
elapsedNow(): Duration = (timeSource.read() - startedAt).toDuration(timeSource.unit) - offset\n        override fun
plus(duration: Duration): TimeMark = LongTimeMark(startedAt, timeSource, offset + duration)\n    }\n\n    override fun
markNow(): TimeMark = LongTimeMark(read(), this, Duration.ZERO)\n}\n\n/**\n * An abstract class used to
implement time sources that return their readings as [Double] values in the specified [unit].\n * @property unit
The unit in which this time source's readings are expressed.\n
*/\n\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic abstract class AbstractDoubleTimeSource(protected val
unit: DurationUnit) : TimeSource {\n    /**\n     * This protected method should be overridden to return the current
reading of the time source expressed as a [Double] number\n     * in the unit specified by the [unit] property.\n
*/\n\n    protected abstract fun read(): Double\n\n    private class DoubleTimeMark(private val startedAt: Double,
private val timeSource: AbstractDoubleTimeSource, private val offset: Duration) : TimeMark() {\n        override fun
elapsedNow(): Duration = (timeSource.read() - startedAt).toDuration(timeSource.unit) - offset\n        override fun
plus(duration: Duration): TimeMark = DoubleTimeMark(startedAt, timeSource, offset + duration)\n    }\n\n    override fun
markNow(): TimeMark = DoubleTimeMark(read(), this, Duration.ZERO)\n}\n\n/**\n * A time source
that has programmatically updatable readings. It is useful as a predictable source of time in tests.\n * @property
unit The unit in which this time source's readings are expressed.\n * @property reading The current reading value
of this time source.\n * @property timeSource The time source used to obtain readings.\n * @property
timeSource The time source used to obtain readings.\n * @property timeSource The time source used to obtain readings.\n
*/\n\n@SinceKotlin("1.3")\n@ExperimentalTime\npublic class TestTimeSource
: AbstractLongTimeSource(unit = DurationUnit.NANOSECONDS) {\n    private var reading: Long = 0L\n\n    override fun
read(): Long = reading\n\n    /**\n     * Advances the current reading value of this time source by the
specified [duration].\n     * [duration] value is rounded down towards zero when converting it to a [Long]
number of nanoseconds.\n     * For example, if the duration being added is `0.6.nanoseconds`, the reading doesn't
advance because\n     * the duration value is rounded to zero nanoseconds.\n     */\n\n    @throws
IllegalStateException when the reading value overflows as the result of this operation.\n\n    public operator fun
plusAssign(duration: Duration) {\n        val longDelta = duration.toLong(unit)\n        reading = if (longDelta !=
Long.MIN_VALUE && longDelta != Long.MAX_VALUE) {\n            // when delta fits in long, add it as long\n
            val newReading = reading + longDelta\n            if (reading xor longDelta >= 0 && reading xor newReading < 0)

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overflow(duration)\n        newReading\n    } else {\n        val delta = duration.toDouble(unit)\n        // when
delta is greater than long, add it as double\n        val newReading = reading + delta\n        if (newReading >
Long.MAX_VALUE || newReading < Long.MIN_VALUE) overflow(duration)\n        newReading.toLong()\n
}\n }\n\n private fun overflow(duration: Duration) {\n    throw IllegalStateException("TestTimeSource will
overflow if its reading ${reading}ns is advanced by $duration.")\n }\n\n", "/*\n * Copyright 2010-2020 JetBrains
s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0
license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin.time\n\nimport
kotlin.contracts.*\n\n/**\n * Executes the given function [block] and returns the duration of elapsed time interval.\n
*\n * The elapsed time is measured with [TimeSource.Monotonic].\n
*\n * @SinceKotlin("1.3")\n * @ExperimentalTime\n * public inline fun measureTime(block: () -> Unit): Duration {\n
contract {\n    callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n }\n return
TimeSource.Monotonic.measureTime(block)\n }\n\n\n/**\n * Executes the given function [block] and returns the
duration of elapsed time interval.\n * The elapsed time is measured with the specified `this` [TimeSource]
instance.\n * @SinceKotlin("1.3")\n * @ExperimentalTime\n * public inline fun TimeSource.measureTime(block: ()
-> Unit): Duration {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    val
mark = markNow()\n    block()\n    return mark.elapsedNow()\n }\n\n\n/**\n * Data class representing a result of
executing an action, along with the duration of elapsed time interval.\n * The elapsed time is measured with
[TimeSource.Monotonic].\n * @property value the result of the
action.\n * @property duration the time elapsed to execute the action.\n
*\n * @SinceKotlin("1.3")\n * @ExperimentalTime\n * public data class TimedValue<T>(val value: T, val duration:
Duration)\n\n\n/**\n * Executes the given function [block] and returns an instance of [TimedValue] class, containing
both\n * the result of the function execution and the duration of elapsed time interval.\n * The elapsed time is
measured with [TimeSource.Monotonic].\n * @SinceKotlin("1.3")\n * @ExperimentalTime\n * public inline fun <T>
measureTimedValue(block: () -> T): TimedValue<T> {\n    contract {\n        callsInPlace(block,
InvocationKind.EXACTLY_ONCE)\n    }\n    return
TimeSource.Monotonic.measureTimedValue(block)\n }\n\n\n/**\n * Executes the given [block] and returns an
instance of [TimedValue] class, containing both\n * the result of function execution and the duration of elapsed time
interval.\n * The elapsed time is measured with the specified `this` [TimeSource] instance.\n
*\n * @SinceKotlin("1.3")\n * @ExperimentalTime\n * public inline fun <T> TimeSource.measureTimedValue(block: ()
-> T): TimedValue<T> {\n    contract {\n        callsInPlace(block, InvocationKind.EXACTLY_ONCE)\n    }\n    val
mark = markNow()\n    val result = block()\n    return TimedValue(result, mark.elapsedNow())\n }\n\n", "/*\n *
Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is
governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage
kotlin\n\nimport kotlin.coroutines.*\nimport kotlin.coroutines.intrinsics.*\nimport
kotlin.native.concurrent.SharedImmutable\n\n/**\n * Defines deep recursive function that keeps its stack on the
heap,\n * which allows very deep recursive computations that do not use the actual call stack.\n * To initiate a call to
this deep recursive function use its [invoke] function.\n * As a rule of thumb, it should be used if recursion goes
deeper than a thousand calls.\n * The [DeepRecursiveFunction] takes one parameter of type [T] and returns a
result of type [R].\n * The [block] of code defines the body of a recursive function. In this block\n *
[callRecursive][DeepRecursiveScope.callRecursive] function can be used to make a recursive call\n * to the
declared function. Other instances of [DeepRecursiveFunction] can be called\n * in this scope with `callRecursive`
extension, too.\n * For example, take a look at the following recursive tree class and a deeply\n * recursive
instance of this tree with 100K nodes:\n * class Tree(val left: Tree? = null, val right: Tree? = null)\n * val
deepTree = generateSequence(Tree()) { Tree(it) }.take(100_000).last()\n * A regular recursive function
can be defined to compute a depth of a tree:\n * fun depth(t: Tree?): Int =\n *     if (t == null) 0 else
max(depth(t.left), depth(t.right)) + 1\n * println(depth(deepTree)) // StackOverflowError\n * If this
`depth` function is called for a `deepTree` it produces [StackOverflowError] because of deep recursion.\n *
However, the `depth` function can be rewritten using `DeepRecursiveFunction` in the following way, and then\n * it
successfully computes [depth(deepTree)][DeepRecursiveFunction.invoke] expression:\n * val depth =

```



```

= this.function\n      if (function !== currentFunction) {\n          // calling a different function -- create a
trampoline to restore function ref\n          this.function = function\n          this.cont =
crossFunctionCompletion(currentFunction, cont as Continuation<Any?>)\n      } else {\n          // calling the
same function -- direct\n          this.cont = cont as Continuation<Any?>\n      }\n      this.value = value\n
}\n      COROUTINE_SUSPENDED\n  }\n\n  private fun crossFunctionCompletion(\n      currentFunction:
DeepRecursiveFunctionBlock,\n      cont: Continuation<Any?>\n  ): Continuation<Any?> =
Continuation(EmptyCoroutineContext) {\n      this.function = currentFunction\n      // When going back from a
trampoline we cannot just call cont.resume (stack usage!)\n      // We delegate the cont.resumeWith(it) call to
runCallLoop\n      this.cont = cont\n      this.result = it\n  }\n\n  @Suppress(\"UNCHECKED_CAST\")\n  fun
runCallLoop(): R {\n      while (true) {\n          // Note: cont is set to null in DeepRecursiveScopeImpl.resumeWith
when the whole computation completes\n          val result = this.result\n          val cont = this.cont\n          ?:
return (result as Result<R>).getOrThrow() // done -- final result\n          // The order of comparison is important
here for that case of rogue class with broken equals\n          if (UNDEFINED_RESULT == result) {\n          //
call \"function\" with \"value\" using \"cont\" as completion\n          val r = try {\n          // This is
block.startCoroutine(this, value, cont)\n          function.startCoroutineUninterceptedOrReturn(this, value,
cont)\n          } catch (e: Throwable) {\n          cont.resumeWithException(e)\n          continue\n
}\n          // If the function returns without suspension -- calls its continuation immediately\n          if (r !==
COROUTINE_SUSPENDED)\n          cont.resume(r as R)\n          } else {\n          // we returned from a
crossFunctionCompletion trampoline -- call resume here\n          this.result = UNDEFINED_RESULT // reset
result back\n          cont.resumeWith(result)\n          }\n      }\n  }\n}\n\n\"/*\n * Copyright 2010-2021
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT
EDIT!\n\n@file:kotlin.jvm.JvmName(\"NumbersKt\")\n@file:kotlin.jvm.JvmMultifileClass\npackage
kotlin\n\nimport kotlin.math.sign\n\n/** Divides this value by the other value, flooring the result to an integer that is
closer to negative infinity. *\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun
Byte.floorDiv(other: Byte): Int = \n    this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.mod(other: Byte): Byte = \n
this.toInt().mod(other.toInt()).toByte()\n\n/** Divides this value by the other value, flooring the result to an integer
that is closer to negative infinity. *\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun
Byte.floorDiv(other: Short): Int = \n    this.toInt().floorDiv(other.toInt())\n\n/**\n * Calculates the remainder of
flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.mod(other: Short): Short = \n
this.toInt().mod(other.toInt()).toShort()\n\n/** Divides this value by the other value, flooring the result to an integer
that is closer to negative infinity. *\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun
Byte.floorDiv(other: Int): Int = \n    this.toInt().floorDiv(other)\n\n/**\n * Calculates the remainder of flooring
division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and
has the absolute value less than the absolute value of the divisor.\n
*\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.mod(other: Int): Int = \n
this.toInt().mod(other)\n\n/** Divides this value by the other value, flooring the result to an integer that is closer to
negative infinity. *\n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic inline fun Byte.floorDiv(other:
Long): Long = \n    this.toLong().floorDiv(other)\n\n/**\n * Calculates the remainder of flooring division of this
value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute
value less than the absolute value of the divisor.\n * \n@SinceKotlin(\"1.5\")\n@kotlin.internal.InlineOnly\npublic
inline fun Byte.mod(other: Long): Long = \n    this.toLong().mod(other)\n\n/** Divides this value by the other
value, flooring the result to an integer that is closer to negative infinity.

```

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*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Short.floorDiv(other: Byte): Int = \n
this.toInt().floorDiv(other.toInt())\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Short.mod(other: Byte): Byte = \n  this.toInt().mod(other.toInt()).toByte()\/n\/n** Divides this value by the other
value, flooring the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Short.floorDiv(other: Short): Int = \n
this.toInt().floorDiv(other.toInt())\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Short.mod(other: Short): Short = \n  this.toInt().mod(other.toInt()).toShort()\/n\/n** Divides this value by the other
value, flooring the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Short.floorDiv(other: Int): Int = \n
this.toInt().floorDiv(other)\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Short.mod(other: Int): Int = \n  this.toInt().mod(other)\/n\/n** Divides this value by the other value, flooring the
result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Short.floorDiv(other: Long): Long = \n
this.toLong().floorDiv(other)\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Short.mod(other: Long): Long = \n  this.toLong().mod(other)\/n\/n** Divides this value by the other value, flooring
the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Int.floorDiv(other: Byte): Int = \n
this.floorDiv(other.toInt())\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Int.mod(other: Byte): Byte = \n  this.mod(other.toInt()).toByte()\/n\/n** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Int.floorDiv(other: Short): Int = \n
this.floorDiv(other.toInt())\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Int.mod(other: Short): Short = \n  this.mod(other.toInt()).toShort()\/n\/n** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Int.floorDiv(other: Int): Int {\/n  var q =
this / other\/n  if (this xor other < 0 && q * other != this) q--\/n  return q}\/n\/n**\/n * Calculates the remainder of
flooring division of this value by the other value.\/n *\/n * The result is either zero or has the same sign as the
_divisor_ and has the absolute value less than the absolute value of the divisor.\/n
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Int.mod(other: Int): Int {\/n  val r = this
% other\/n  return r + (other and (((r xor other) and (r or -r)) shr 31))}\/n\/n** Divides this value by the other value,
flooring the result to an integer that is closer to negative infinity.
*\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun Int.floorDiv(other: Long): Long = \n
this.toLong().floorDiv(other)\/n\/n**\/n * Calculates the remainder of flooring division of this value by the other
value.\/n *\/n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the
absolute value of the divisor.\/n *\/n@SinceKotlin(1.5)\/n@kotlin.internal.InlineOnly\/npublic inline fun
Int.mod(other: Long): Long = \n  this.toLong().mod(other)\/n\/n** Divides this value by the other value, flooring

```

the result to an integer that is closer to negative infinity.

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Long.floorDiv(other: Byte): Long = \nthis.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of flooring division of this value by the other\n * value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n */\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun\nLong.mod(other: Byte): Byte = \nthis.mod(other.toLong()).toByte()\n\n/** Divides this value by the other value,\n * flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Long.floorDiv(other: Short): Long = \nthis.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of flooring division of this value by the other\n * value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n */\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun\nLong.mod(other: Short): Short = \nthis.mod(other.toLong()).toShort()\n\n/** Divides this value by the other\n * value, flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Long.floorDiv(other: Int): Long = \nthis.floorDiv(other.toLong())\n\n/**\n * Calculates the remainder of flooring division of this value by the other\n * value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n */\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun\nLong.mod(other: Int): Int = \nthis.mod(other.toLong()).toInt()\n\n/** Divides this value by the other value,\n * flooring the result to an integer that is closer to negative infinity.
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Long.floorDiv(other: Long): Long {\n    var q = this / other\n    if (this xor other < 0 && q * other != this) q--\n    return q\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n */
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Long.mod(other: Long): Long {\n    val r = this % other\n    return r + (other and (((r xor other) and (r or -r)) shr 63))\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest representable number. In this case the\n * absolute value of the result can be less than or _equal to_ the absolute value of the divisor.\n */
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Float.mod(other: Float): Float {\n    val r = this % other\n    return if (r != 0.0.toFloat() && r.sign != other.sign) r + other else r\n}\n\n/**\n * Calculates the remainder of flooring division of this value by the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest representable number. In this case the\n * absolute value of the result can be less than or _equal to_ the absolute value of the divisor.\n */
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Float.mod(other: Double): Double = \nthis.toDouble().mod(other)\n\n/**\n * Calculates the remainder of flooring division of this value by the other\n * value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less than the\n * absolute value of the divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest\n * representable number. In this case the absolute value of the result can be less than or _equal to_ the\n * absolute value of the divisor.\n */
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Double.mod(other: Float):\nDouble = \nthis.mod(other.toDouble())\n\n/**\n * Calculates the remainder of flooring division of this value by\n * the other value.\n * \n * The result is either zero or has the same sign as the _divisor_ and has the absolute value less\n * than the absolute value of the divisor.\n * \n * If the result cannot be represented exactly, it is rounded to the nearest\n * representable number. In this case the absolute value of the result can be less than or _equal to_ the\n * absolute value of the divisor.\n */
```

```
*\n@SinceKotlin("1.5")\n@kotlin.internal.InlineOnly\npublic inline fun Double.mod(other:\nDouble): Double {\n    val r = this % other\n    return if (r != 0.0 && r.sign != other.sign) r + other else\nr\n}\n\n/**\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of
```

```

this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\npackage kotlin\n\nimport kotlin.internal.InlineOnly\n\n/**\n * Returns a hash code value for the object or zero if the object is `null`.\n * @see Any.hashCode\n */\n@SinceKotlin("1.3")\n@InlineOnly\npublic inline fun Any?.hashCode(): Int = this?.hashCode() ?: 0\n","/*\n * Copyright 2010-2020 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\npackage kotlin\n\n/**\n * Represents a version of the Kotlin standard library.\n * [major], [minor] and [patch] are integer components of a version,\n * they must be non-negative and not greater than 255 ([MAX_COMPONENT_VALUE]).\n * @constructor Creates a version from all three components.\n */\n@SinceKotlin("1.1")\npublic class KotlinVersion(val major: Int, val minor: Int, val patch: Int) : Comparable<KotlinVersion> {\n    /**\n     * Creates a version from [major] and [minor] components, leaving [patch] component zero.\n     */\n    public constructor(major: Int, minor: Int) : this(major, minor, 0)\n\n    private val version = versionOf(major, minor, patch)\n\n    private fun versionOf(major: Int, minor: Int, patch: Int): Int {\n        require(major in 0..MAX_COMPONENT_VALUE && minor in 0..MAX_COMPONENT_VALUE && patch in 0..MAX_COMPONENT_VALUE) {\n            "Version components are out of range: $major.$minor.$patch"\n        }\n        return major.shl(16) + minor.shl(8) + patch\n    }\n\n    /**\n     * Returns the string representation of this version.\n     */\n    override fun toString(): String = "$major.$minor.$patch"\n\n    override fun equals(other: Any?): Boolean {\n        if (this === other) return true\n        val otherVersion = (other as? KotlinVersion) ?: return false\n        return this.version == otherVersion.version\n    }\n\n    override fun hashCode(): Int = version\n\n    override fun compareTo(other: KotlinVersion): Int = version - other.version\n\n    /**\n     * Returns `true` if this version is not less than the version specified\n     * with the provided [major] and [minor] components.\n     */\n    public fun isAtLeast(major: Int, minor: Int): Boolean = // this.version >= versionOf(major, minor, 0)\n        this.major > major || (this.major == major && this.minor >= minor)\n\n    /**\n     * Returns `true` if this version is not less than the version specified\n     * with the provided [major], [minor] and [patch] components.\n     */\n    public fun isAtLeast(major: Int, minor: Int, patch: Int): Boolean = // this.version >= versionOf(major, minor, patch)\n        this.major > major || (this.major == major && (this.minor > minor || this.minor == minor && this.patch >= patch))\n\n    companion object {\n        /**\n         * Maximum value a version component can have, a constant value 255.\n         */\n        // NOTE: Must be placed before CURRENT because its initialization requires this field being initialized in JS\n        public const val MAX_COMPONENT_VALUE = 255\n\n        /**\n         * Returns the current version of the Kotlin standard library.\n         */\n        @kotlin.jvm.JvmField\n        public val CURRENT: KotlinVersion = KotlinVersionCurrentValue.get()\n    }\n\n    // this class is ignored during classpath normalization when considering whether to recompile dependencies in Kotlin build\n    private object KotlinVersionCurrentValue {\n        @kotlin.jvm.JvmStatic\n        fun get(): KotlinVersion = KotlinVersion(1, 6, 10) // value is written here automatically during build\n    },"/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName("LateinitKt")\n@file:Suppress("unused")\n\npackage kotlin\n\nimport kotlin.internal.InlineOnly\nimport kotlin.internal.AccessibleLateinitPropertyLiteral\nimport kotlin.reflect.KProperty0\n\n/**\n * Returns `true` if this lateinit property has been assigned a value, and `false` otherwise.\n * Cannot be used in an inline function, to avoid binary compatibility issues.\n */\n@SinceKotlin("1.2")\n@InlineOnly\ninline val @receiver:AccessibleLateinitPropertyLiteral KProperty0<*>.isInitialized: Boolean\n    get() = throw NotImplementedError("Implementation is intrinsic")\n","/*\n * Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n */\n\n@file:kotlin.jvm.JvmName("LazyKt")\n@file:kotlin.jvm.JvmMultifileClass\n\npackage kotlin\n\nimport kotlin.reflect.KProperty\n\n/**\n * Represents a value with lazy initialization.\n * To create an instance of [Lazy] use the [lazy] function.\n */\n\npublic interface Lazy<out T> {\n    /**\n     * Gets the lazily initialized value of the current Lazy instance.\n     * Once the value was initialized it must not change during the rest of lifetime of this Lazy instance.\n     */\n    public val value: T\n\n    /**\n     * Returns `true` if a value for this Lazy instance has been

```

already initialized, and `false` otherwise.

```

    * Once this function has returned `true` it stays `true` for the rest of
    lifetime of this Lazy instance.
    */
    public fun isInitialized(): Boolean {
    }

    * Creates a new instance of
    the [Lazy] that is already initialized with the specified [value].
    */
    public fun <T> lazyOf(value: T): Lazy<T> =
    InitializedLazyImpl(value)

    * An extension to delegate a read-only property of type [T] to an instance of
    [Lazy].
    */
    * This extension allows to use instances of Lazy for property delegation:
    */
    `val` property: String by
    lazy { initializer }
    */
    @kotlin.internal.InlineOnly
    public inline operator fun <T> Lazy<T>.getValue(thisRef:
    Any?, property: KProperty<*>): T = value

    * Specifies how a [Lazy] instance synchronizes initialization
    among multiple threads.
    */
    public enum class LazyThreadSafetyMode {
    }

    * Locks are used to ensure
    that only a single thread can initialize the [Lazy] instance.
    */
    SYNCHRONIZED,

    * Initializer
    function can be called several times on concurrent access to uninitialized [Lazy] instance value,
    * but only the
    first returned value will be used as the value of [Lazy] instance.
    */
    PUBLICATION,

    * No
    locks are used to synchronize an access to the [Lazy] instance value; if the instance is accessed from multiple
    threads, its behavior is undefined.
    */
    * This mode should not be used unless the [Lazy] instance is
    guaranteed never to be initialized from more than one thread.
    */
    NONE,
    }

    internal object
    UNINITIALIZED_VALUE
    internal to be called from lazy in JS
    internal class UnsafeLazyImpl<out
    T>(initializer: () -> T) : Lazy<T>, Serializable {
    private var initializer: (() -> T)? = initializer
    private var
    _value: Any? = UNINITIALIZED_VALUE

    override val value: T
    get() {
    if (_value ===
    UNINITIALIZED_VALUE) {
    _value = initializer!!()
    initializer = null
    }
    @Suppress("UNCHECKED_CAST")
    return _value as T
    }

    override fun isInitialized():
    Boolean = _value != UNINITIALIZED_VALUE

    override fun toString(): String =
    if (isInitialized())
    value.toString() else "Lazy value not initialized yet."

    private fun writeReplace(): Any =
    InitializedLazyImpl(value)
    }

    internal class InitializedLazyImpl<out T>(override val value: T) : Lazy<T>,
    Serializable {
    override fun isInitialized(): Boolean = true

    override fun toString(): String =
    value.toString()
    }

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    contributors.
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    license/LICENSE.txt file.
    */
    @file:kotlin.jvm.JvmMultifileClass
    @file:kotlin.jvm.JvmName("NumbersKt")
    package kotlin

    *
    Counts the number of set bits in the binary representation of this [Int] number.
    */
    @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun
    Int.countOneBits(): Int

    * Counts the number of consecutive most significant bits that are zero in the binary
    representation of this [Int] number.
    */
    @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun
    Int.countLeadingZeroBits(): Int

    * Counts the number of consecutive least significant bits that are zero in
    the binary representation of this [Int] number.
    */
    @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun
    Int.countTrailingZeroBits(): Int

    * Returns a number having a single bit set in the position of the most
    significant set bit of this [Int] number,
    * or zero, if this number is zero.
    */
    @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun
    Int.takeHighestOneBit(): Int

    * Returns a number having a single bit set in the position of the least
    significant set bit of this [Int] number,
    * or zero, if this number is zero.
    */
    @SinceKotlin("1.4")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun
    Int.takeLowestOneBit(): Int

    * Rotates the binary representation of this [Int] number left by the specified
    [bitCount] number of bits.
    * The most significant bits pushed out from the left side reenter the number as the least
    significant bits on the right side.
    * Rotating the number left by a negative bit count is the same as rotating it
    right by the negated bit count:
    * `number.rotateLeft(-n) == number.rotateRight(n)`
    * Rotating by a multiple
    of [Int.SIZE_BITS] (32) returns the same number, or more generally
    * `number.rotateLeft(n) ==
    number.rotateLeft(n % 32)`
    */
    @SinceKotlin("1.6")
    @WasExperimental(ExperimentalStdlibApi::class)
    public expect fun

```

Int.rotateLeft(bitCount: Int): Int\n\n\*\*\n \* Rotates the binary representation of this [Int] number right by the specified [bitCount] number of bits.\n \* The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n \*\n \* Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n \* `number.rotateRight(-n) == number.rotateLeft(n)`\n \*\n \* Rotating by a multiple of [Int.SIZE\_BITS] (32) returns the same number, or more generally\n \* `number.rotateRight(n) == number.rotateRight(n % 32)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Int.rotateRight(bitCount: Int): Int\n\n\*\*\n \* Counts the number of set bits in the binary representation of this [Long] number.\n \*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.countOneBits(): Int\n\n\*\*\n \* Counts the number of consecutive most significant bits that are zero in the binary representation of this [Long] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.countLeadingZeroBits(): Int\n\n\*\*\n \* Counts the number of consecutive least significant bits that are zero in the binary representation of this [Long] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.countTrailingZeroBits(): Int\n\n\*\*\n \* Returns a number having a single bit set in the position of the most significant set bit of this [Long] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.takeHighestOneBit(): Long\n\n\*\*\n \* Returns a number having a single bit set in the position of the least significant set bit of this [Long] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.takeLowestOneBit(): Long\n\n\*\*\n \* Rotates the binary representation of this [Long] number left by the specified [bitCount] number of bits.\n \* The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n \*\n \* Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n \* `number.rotateLeft(-n) == number.rotateRight(n)`\n \*\n \* Rotating by a multiple of [Long.SIZE\_BITS] (64) returns the same number, or more generally\n \* `number.rotateLeft(n) == number.rotateLeft(n % 64)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.rotateLeft(bitCount: Int): Long\n\n\*\*\n \* Rotates the binary representation of this [Long] number right by the specified [bitCount] number of bits.\n \* The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n \*\n \* Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n \* `number.rotateRight(-n) == number.rotateLeft(n)`\n \*\n \* Rotating by a multiple of [Long.SIZE\_BITS] (64) returns the same number, or more generally\n \* `number.rotateRight(n) == number.rotateRight(n % 64)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic expect fun

Long.rotateRight(bitCount: Int): Long\n\n\*\*\n \* Counts the number of set bits in the binary representation of this [Byte] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun

Byte.countOneBits(): Int = (toInt() and 0xFF).countOneBits()\n\n\*\*\n \* Counts the number of consecutive most significant bits that are zero in the binary representation of this [Byte] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun

Byte.countLeadingZeroBits(): Int = (toInt() and 0xFF).countLeadingZeroBits() - (Int.SIZE\_BITS - Byte.SIZE\_BITS)\n\n\*\*\n \* Counts the number of consecutive least significant bits that are zero in the binary representation of this [Byte] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun

Byte.countTrailingZeroBits(): Int = (toInt() or 0x100).countTrailingZeroBits()\n\n\*\*\n \* Returns a number having a single bit set in the position of the most significant set bit of this [Byte] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Byte.takeHighestOneBit(): Byte = (toInt() and 0xFF).takeHighestOneBit().toByte()\n\n/\*\*\n \* Returns a number having a single bit set in the position of the least significant set bit of this [Byte] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Byte.takeLowestOneBit(): Byte = toInt().takeLowestOneBit().toByte()\n\n/\*\*\n \* Rotates the binary representation of this [Byte] number left by the specified [bitCount] number of bits.\n \* The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n \* Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n \* `number.rotateLeft(-n) == number.rotateRight(n)`\n \* Rotating by a multiple of [Byte.SIZE\_BITS] (8) returns the same number, or more generally\n \* `number.rotateLeft(n) == number.rotateLeft(n % 8)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Byte.rotateLeft(bitCount: Int): Byte =\n (toInt().shl(bitCount and 7) or (toInt() and 0xFF).ushr(8 - (bitCount and 7))).toByte()\n\n/\*\*\n \* Rotates the binary representation of this [Byte] number right by the specified [bitCount] number of bits.\n \* The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n \* Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n \* `number.rotateRight(-n) == number.rotateLeft(n)`\n \* Rotating by a multiple of [Byte.SIZE\_BITS] (8) returns the same number, or more generally\n \* `number.rotateRight(n) == number.rotateRight(n % 8)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Byte.rotateRight(bitCount: Int): Byte =\n (toInt().shl(8 - (bitCount and 7)) or (toInt() and 0xFF).ushr(bitCount and 7)).toByte()\n\n/\*\*\n \* Counts the number of set bits in the binary representation of this [Short] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.countOneBits(): Int = (toInt() and 0xFFFF).countOneBits()\n\n/\*\*\n \* Counts the number of consecutive most significant bits that are zero in the binary representation of this [Short] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.countLeadingZeroBits(): Int =\n (toInt() and 0xFFFF).countLeadingZeroBits() - (Int.SIZE\_BITS - Short.SIZE\_BITS)\n\n/\*\*\n \* Counts the number of consecutive least significant bits that are zero in the binary representation of this [Short] number.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.countTrailingZeroBits(): Int = (toInt() or 0x10000).countTrailingZeroBits()\n\n/\*\*\n \* Returns a number having a single bit set in the position of the most significant set bit of this [Short] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.takeHighestOneBit(): Short = (toInt() and 0xFFFF).takeHighestOneBit().toShort()\n\n/\*\*\n \* Returns a number having a single bit set in the position of the least significant set bit of this [Short] number,\n \* or zero, if this number is zero.\n

\*\n@SinceKotlin("1.4")\n@WasExperimental(ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun Short.takeLowestOneBit(): Short = toInt().takeLowestOneBit().toShort()\n\n/\*\*\n \* Rotates the binary representation of this [Short] number left by the specified [bitCount] number of bits.\n \* The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n \* Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n \* `number.rotateLeft(-n) == number.rotateRight(n)`\n \* Rotating by a multiple of [Short.SIZE\_BITS] (16) returns the same number, or more generally\n \* `number.rotateLeft(n) == number.rotateLeft(n % 16)`\n

\*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class)\npublic fun Short.rotateLeft(bitCount: Int): Short =\n (toInt().shl(bitCount and 15) or (toInt() and 0xFFFF).ushr(16 - (bitCount and 15))).toShort()\n\n/\*\*\n \* Rotates the binary representation of this [Short] number right by the specified [bitCount] number of bits.\n \* The least significant bits pushed out from the right side reenter the number as the

most significant bits on the left side.  
Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:  
`number.rotateRight(-n) == number.rotateLeft(n)`  
Rotating by a multiple of [Short.SIZE\_BITS] (16) returns the same number, or more generally  
`number.rotateRight(n) == number.rotateRight(n % 16)`

```
SinceKotlin("1.6")WasExperimental(ExperimentalStdlibApi::class)public fun
Short.rotateRight(bitCount: Int): Short = (toInt().shl(16 - (bitCount and 15)) or (toInt() and
0xFFFF).ushr(bitCount and 15)).toShort()
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license/LICENSE.txt file.
package kotlin.nimpor kotlin.internal.RequireKotlin
kotlin.internal.RequireKotlinVersionKind@kotlin.internal.InlineOnly@SinceKotlin("1.2")@Suppress("IN
VISIBLE_MEMBER", "INVISIBLE_REFERENCE")@RequireKotlin("1.2.30", level =
DeprecationLevel.HIDDEN, versionKind = RequireKotlinVersionKind.COMPILER_VERSION)public inline fun
<R> suspend(noinline block: suspend () -> R): suspend () -> R = block
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license that can be found in the license/LICENSE.txt file.
```

```
@file:kotlin.jvm.JvmName("TuplesKt")package kotlin.n.n/** Represents a generic pair of two
values. There is no meaning attached to values in this class, it can be used for any purpose. Pair exhibits
value semantics, i.e. two pairs are equal if both components are equal. An example of decomposing it into
values:
@sample samples.misc.Tuples.pairDestructuring
@param A type of the first value.
@param B type of the second value.
@property first First value.
@property second Second value.
@constructor
Creates a new instance of Pair.
public data class Pair<out A, out B> {
    public val first: A,
    public val
second: B
} : Serializable {
    /** Returns string representation of the [Pair] including its [first] and
[second] values.
    public override fun toString(): String = "$first, $second"
    /** Creates a tuple
of type [Pair] from this and [that].
    This can be useful for creating [Map] literals with less noise, for
example:
    @sample samples.collections.Maps.instantiation.mapFromPairs
    public infix fun <A, B>
A.to(that: B): Pair<A, B> = Pair(this, that)
    /** Converts this pair into a list.
    @sample
samples.misc.Tuples.pairToList
    public fun <T> Pair<T, T>.toList(): List<T> = listOf(first, second)
    /** Represents a triad of values
    There is no meaning attached to values in this class, it can be used for any
purpose. Triple exhibits value semantics, i.e. two triples are equal if all three components are equal. An
example of decomposing it into values:
    @sample samples.misc.Tuples.tripleDestructuring
    @param A
type of the first value.
    @param B type of the second value.
    @param C type of the third value.
    @property
first First value.
    @property second Second value.
    @property third Third value.
    public data class
Triple<out A, out B, out C> {
    public val first: A,
    public val second: B,
    public val third: C
} : Serializable {
    /** Returns string representation of the [Triple] including its [first], [second] and [third] values.
    public override fun toString(): String = "$first, $second, $third"
    /** Converts this triple into a
list.
    @sample samples.misc.Tuples.tripleToList
    public fun <T> Triple<T, T, T>.toList(): List<T> =
listOf(first, second, third)
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contributors. Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.
// Auto-generated file. DO NOT EDIT!
package kotlin.ranges.n.nimport
kotlin.internal.n.n/** A range of values of type `UInt`.
```

```
@SinceKotlin("1.5")@WasExperimental(ExperimentalUnsignedTypes::class)public class UIntRange(start:
UInt, endInclusive: UInt) : UIntProgression(start, endInclusive, 1), ClosedRange<UInt> {
    override val start:
UInt get() = first
    override val endInclusive: UInt get() = last
    override fun contains(value: UInt): Boolean =
first <= value && value <= last
    /** Checks if the range is empty.
    The range is empty if its
start value is greater than the end value.
    override fun isEmpty(): Boolean = first > last
    override fun
equals(other: Any?): Boolean = (other is UIntRange && (isEmpty() && other.isEmpty()) || first ==
other.first && last == other.last)
    override fun hashCode(): Int = if (isEmpty()) -1 else (31 * first.toInt()
+ last.toInt())
    override fun toString(): String = "$first..$last"
    companion object {
        /** An empty
```

```

range of values of type UInt. */n    public val EMPTY: UIntRange = UIntRange(UInt.MAX_VALUE,
UInt.MIN_VALUE)\n    }\n}\n\n/**\n * A progression of values of type `UInt`.\n
*/n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic open class
UIntProgression\n\ninternal constructor(\n    start: UInt,\n    endInclusive: UInt,\n    step: Int\n) : Iterable<UInt> {\n
init {\n    if (step == 0.toInt()) throw kotlin.IllegalArgumentException("Step must be non-zero.")\n    if (step
== Int.MIN_VALUE) throw kotlin.IllegalArgumentException("Step must be greater than Int.MIN_VALUE to
avoid overflow on negation.")\n    }\n\n    /**\n     * The first element in the progression.\n     */\n    public val first:
UInt = start\n\n    /**\n     * The last element in the progression.\n     */\n    public val last: UInt =
getProgressionLastElement(start, endInclusive, step)\n\n    /**\n     * The step of the progression.\n     */\n    public
val step: Int = step\n\n    final override fun iterator(): Iterator<UInt> = UIntProgressionIterator(first, last, step)\n\n
/**\n     * Checks if the progression is empty.\n     *\n     * Progression with a positive step is empty if its first
element is greater than the last element.\n     * Progression with a negative step is empty if its first element is less
than the last element.\n     */\n    public open fun isEmpty(): Boolean = if (step > 0) first > last else first < last\n\n
override fun equals(other: Any?): Boolean =\n        other is UIntProgression && (isEmpty() && other.isEmpty() ||\n
        first == other.first && last == other.last && step == other.step)\n\n    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (31 * first.toInt() + last.toInt()) + step.toInt())\n\n    override fun toString(): String = if
(step > 0) "$first..$last step $step" else "$first downTo $last step ${-step}"\n\n    companion object {\n        /**\n         * Creates UIntProgression within the specified bounds of a closed range.\n         * The progression starts with
the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n         * In
order to go backwards the [step] must be negative.\n         * [step] must be greater than `Int.MIN_VALUE`
and not equal to zero.\n         */\n        public fun fromClosedRange(rangeStart: UInt, rangeEnd: UInt, step: Int):
UIntProgression = UIntProgression(rangeStart, rangeEnd, step)\n    }\n}\n\n\n/**\n * An iterator over a progression
of values of type `UInt`.\n * @property step the number by which the value is incremented on each step.\n
*/n@SinceKotlin("1.3")\n@Suppress("DEPRECATION_ERROR")\nprivate class UIntProgressionIterator(first:
UInt, last: UInt, step: Int) : UIntIterator() {\n    private val finalElement = last\n    private var hasNext: Boolean = if
(step > 0) first <= last else first >= last\n    private val step = step.toUInt() // use 2-complement math for negative
steps\n    private var next = if (hasNext) first else finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n
override fun nextUInt(): UInt {\n        val value = next\n        if (value == finalElement) {\n            if (!hasNext)
throw kotlin.NoSuchElementException()\n            hasNext = false\n        } else {\n            next += step\n        }\n
return value\n    }\n}\n\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language
contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the
license/LICENSE.txt file.\n */\n\n// Auto-generated file. DO NOT EDIT!\n\npackage kotlin.collections\n\n/** An
iterator over a sequence of values of type `UByte`. */n@Deprecated("This class is not going to be stabilized and is
to be removed soon.", level = DeprecationLevel.ERROR)\n@SinceKotlin("1.3")\npublic abstract class
UByteIterator : Iterator<UByte> {\n    final override fun next() = nextUByte()\n\n    /** Returns the next value in the
sequence without boxing. */\n    public abstract fun nextUByte(): UByte\n}\n\n/** An iterator over a sequence of
values of type `UShort`. */n@Deprecated("This class is not going to be stabilized and is to be removed soon.",
level = DeprecationLevel.ERROR)\n@SinceKotlin("1.3")\npublic abstract class UShortIterator : Iterator<UShort>
{\n    final override fun next() = nextUShort()\n\n    /** Returns the next value in the sequence without boxing. */\n
public abstract fun nextUShort(): UShort\n}\n\n/** An iterator over a sequence of values of type `UInt`.\n
*/n@Deprecated("This class is not going to be stabilized and is to be removed soon.", level =
DeprecationLevel.ERROR)\n@SinceKotlin("1.3")\npublic abstract class UIntIterator : Iterator<UInt> {\n    final
override fun next() = nextUInt()\n\n    /** Returns the next value in the sequence without boxing. */\n    public
abstract fun nextUInt(): UInt\n}\n\n/** An iterator over a sequence of values of type `ULong`. */\n
*/n@Deprecated("This class is not going to be stabilized and is to be removed soon.", level =
DeprecationLevel.ERROR)\n@SinceKotlin("1.3")\npublic abstract class ULongIterator : Iterator<ULong> {\n    final
override fun next() = nextULong()\n\n    /** Returns the next value in the sequence without boxing. */\n    public
abstract fun nextULong(): ULong\n}\n\n\n"/**\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin

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Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n\n// Auto-generated file. DO NOT EDIT!\n\npackage
kotlin.ranges\n\nimport kotlin.internal.*\n\n/**\n * A range of values of type `ULong`.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic class
ULongRange(start: ULong, endInclusive: ULong) : ULongProgression(start, endInclusive, 1),
ClosedRange<ULong> {\n    override val start: ULong get() = first\n    override val endInclusive: ULong get() =
last\n\n    override fun contains(value: ULong): Boolean = first <= value && value <= last\n\n    /**\n     * Checks
if the range is empty.\n     *\n     * The range is empty if its start value is greater than the end value.\n     */\n
    override fun isEmpty(): Boolean = first > last\n\n    override fun equals(other: Any?): Boolean =\n        other is
ULongRange && (isEmpty() && other.isEmpty()) ||\n            first == other.first && last == other.last)\n\n
    override fun hashCode(): Int =\n        if (isEmpty()) -1 else (31 * (first xor (first shr 32)).toInt() + (last xor (last shr
32)).toInt())\n\n    override fun toString(): String = "$first..$last"\n\n    companion object {\n        /**\n         * An empty
range of values of type ULong. *\n         * public val EMPTY: ULongRange = ULongRange(ULong.MAX_VALUE,
ULong.MIN_VALUE)\n        }\n    }\n\n    /**\n     * A progression of values of type `ULong`.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic open class
ULongProgression\n    internal constructor(\n        start: ULong,\n        endInclusive: ULong,\n        step: Long\n    ) :
Iterable<ULong> {\n        init {\n            if (step == 0.toLong()) throw kotlin.IllegalArgumentException("Step must be
non-zero.")\n            if (step == Long.MIN_VALUE) throw kotlin.IllegalArgumentException("Step must be greater
than Long.MIN_VALUE to avoid overflow on negation.")\n        }\n\n        /**\n         * The first element in the
progression.\n         *\n         * public val first: ULong = start\n         *\n         * The last element in the progression.\n         */\n
        public val last: ULong = getProgressionLastElement(start, endInclusive, step)\n\n        /**\n         * The step of the
progression.\n         *\n         * public val step: Long = step\n\n        final override fun iterator(): Iterator<ULong> =
ULongProgressionIterator(first, last, step)\n\n        /**\n         *\n         * Checks if the progression is empty.\n         *\n         *
Progression with a positive step is empty if its first element is greater than the last element.\n         * Progression with a
negative step is empty if its first element is less than the last element.\n         *\n         * public open fun isEmpty(): Boolean
= if (step > 0) first > last else first < last\n\n        override fun equals(other: Any?): Boolean =\n            other is
ULongProgression && (isEmpty() && other.isEmpty()) ||\n                first == other.first && last == other.last &&
step == other.step)\n\n        override fun hashCode(): Int =\n            if (isEmpty()) -1 else (31 * (31 * (first xor (first shr
32)).toInt() + (last xor (last shr 32)).toInt()) + (step xor (step ushr 32)).toInt())\n\n        override fun toString(): String =
if (step > 0) "$first..$last step $step" else "$first downTo $last step ${-step}"\n\n        companion object {\n            /**\n             * Creates ULongProgression within the specified bounds of a closed range.\n             *\n             * The progression
starts with the [rangeStart] value and goes toward the [rangeEnd] value not excluding it, with the specified [step].\n             *\n             * In order to go backwards the [step] must be negative.\n             *\n             * [step] must be greater than
`Long.MIN_VALUE` and not equal to zero.\n             *\n             * public fun fromClosedRange(rangeStart: ULong,
rangeEnd: ULong, step: Long): ULongProgression = ULongProgression(rangeStart, rangeEnd, step)\n            }\n        }\n\n        /**\n         * An iterator over a progression of values of type `ULong`.\n         *\n         * @property step the number by which
the value is incremented on each step.\n        }\n    }\n\n    /**\n     *\n     *\n@SinceKotlin("1.3")\n@Suppress("DEPRECATION_ERROR")\nprivate class
ULongProgressionIterator(first: ULong, last: ULong, step: Long) : ULongIterator() {\n    private val finalElement =
last\n    private var hasNext: Boolean = if (step > 0) first <= last else first >= last\n    private val step =
step.toULong() // use 2-complement math for negative steps\n    private var next = if (hasNext) first else
finalElement\n\n    override fun hasNext(): Boolean = hasNext\n\n    override fun nextULong(): ULong {\n        val
value = next\n        if (value == finalElement) {\n            if (!hasNext) throw kotlin.NoSuchElementException()\n
            hasNext = false\n        } else {\n            next += step\n        }\n        return value\n    }\n}\n\n"/\n * Copyright
2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed
by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n *\n\npackage kotlin.math\n\n/**\n *
Returns the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\

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```

public inline fun min(a: UInt, b: UInt): UInt { \n  return minOf(a, b)\n}\n\n/**\n * Returns the smaller of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun min(a: ULong, b: ULong): ULong {\n  return minOf(a, b)\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun max(a: UInt, b: UInt): UInt {\n  return maxOf(a, b)\n}\n\n/**\n * Returns the greater of two values.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun max(a: ULong, b: ULong): ULong {\n  return maxOf(a, b)\n}", "/*\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n\n@file:kotlin.jvm.JvmName("UNumbersKt")\npackage kotlin\n\n/**\n * Counts the number of set bits in the binary representation of this [UInt] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class, ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countOneBits(): Int = toInt().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the binary representation of this [UInt] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class, ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countLeadingZeroBits(): Int = toInt().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero in the binary representation of this [UInt] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class, ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.countTrailingZeroBits(): Int = toInt().countTrailingZeroBits()\n\n/**\n * Returns a number having a single bit set in the position of the most significant set bit of this [UInt] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class, ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.takeHighestOneBit(): UInt = toInt().takeHighestOneBit().toUInt()\n\n/**\n * Returns a number having a single bit set in the position of the least significant set bit of this [UInt] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class, ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.takeLowestOneBit(): UInt = toInt().takeLowestOneBit().toUInt()\n\n/**\n * Rotates the binary representation of this [UInt] number left by the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n * Rotating by a multiple of [UInt.SIZE_BITS] (32) returns the same number, or more generally\n * `number.rotateLeft(n) == number.rotateLeft(n % 32)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class, ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.rotateLeft(bitCount: Int): UInt = toInt().rotateLeft(bitCount).toUInt()\n\n/**\n * Rotates the binary representation of this [UInt] number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side reenter the number as the most significant bits on the left side.\n * Rotating the number right by a negative bit count is the same as rotating it left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n * Rotating by a multiple of [UInt.SIZE_BITS] (32) returns the same number, or more generally\n * `number.rotateRight(n) == number.rotateRight(n % 32)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class, ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UInt.rotateRight(bitCount: Int): UInt = toInt().rotateRight(bitCount).toUInt()\n\n/**\n * Counts the number of set bits in the binary representation

```



```

*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.takeHighestOneBit(): UByte
= toInt().takeHighestOneBit().toUByte()\n\n/**\n * Returns a number having a single bit set in the position of the
least significant set bit of this [UByte] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.takeLowestOneBit(): UByte =
toInt().takeLowestOneBit().toUByte()\n\n/**\n * Rotates the binary representation of this [UByte] number left by
the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the
number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the
same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n *
Rotating by a multiple of [UByte.SIZE_BITS] (8) returns the same number, or more generally\n *
`number.rotateLeft(n) == number.rotateLeft(n % 8)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.rotateLeft(bitCount:
Int): UByte = toByte().rotateLeft(bitCount).toUByte()\n\n/**\n * Rotates the binary representation of this [UByte]
number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the right side
reenter the number as the most significant bits on the left side.\n * Rotating the number right by a negative bit
count is the same as rotating it left by the negated bit count:\n * `number.rotateRight(-n) == number.rotateLeft(n)`\n
*\n * Rotating by a multiple of [UByte.SIZE_BITS] (8) returns the same number, or more generally\n *
`number.rotateRight(n) == number.rotateRight(n % 8)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UByte.rotateRight(bitCount:
Int): UByte = toByte().rotateRight(bitCount).toUByte()\n\n/**\n * Counts the number of set bits in the binary
representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countOneBits(): Int =
toInt().countOneBits()\n\n/**\n * Counts the number of consecutive most significant bits that are zero in the
binary representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countLeadingZeroBits(): Int
= toShort().countLeadingZeroBits()\n\n/**\n * Counts the number of consecutive least significant bits that are zero
in the binary representation of this [UShort] number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.countTrailingZeroBits(): Int
= toShort().countTrailingZeroBits()\n\n/**\n * Returns a number having a single bit set in the position of the most
significant set bit of this [UShort] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.takeHighestOneBit(): UShort
= toInt().takeHighestOneBit().toUShort()\n\n/**\n * Returns a number having a single bit set in the position of the
least significant set bit of this [UShort] number,\n * or zero, if this number is zero.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class,
ExperimentalStdlibApi::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.takeLowestOneBit(): UShort
= toInt().takeLowestOneBit().toUShort()\n\n/**\n * Rotates the binary representation of this [UShort] number left
by the specified [bitCount] number of bits.\n * The most significant bits pushed out from the left side reenter the
number as the least significant bits on the right side.\n * Rotating the number left by a negative bit count is the
same as rotating it right by the negated bit count:\n * `number.rotateLeft(-n) == number.rotateRight(n)`\n *
Rotating by a multiple of [UShort.SIZE_BITS] (16) returns the same number, or more generally\n *
`number.rotateLeft(n) == number.rotateLeft(n % 16)`\n

```

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*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.rotateLeft(bitCount:
Int): UShort = toShort().rotateLeft(bitCount).toUShort()\n\n/**\n * Rotates the binary representation of this
[UShort] number right by the specified [bitCount] number of bits.\n * The least significant bits pushed out from the
right side reenter the number as the most significant bits on the left side.\n *\n * Rotating the number right by a
negative bit count is the same as rotating it left by the negated bit count.\n * `number.rotateRight(-n) ==
number.rotateLeft(n)`\n *\n * Rotating by a multiple of [UShort.SIZE_BITS] (16) returns the same number, or more
generally\n * `number.rotateRight(n) == number.rotateRight(n % 16)`\n
*\n@SinceKotlin("1.6")\n@WasExperimental(ExperimentalStdlibApi::class,
ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\npublic inline fun UShort.rotateRight(bitCount:
Int): UShort = toShort().rotateRight(bitCount).toUShort()\n", "\n * Copyright 2010-2021 JetBrains s.r.o. and Kotlin
Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license that can be
found in the license/LICENSE.txt file.\n *\n@npackage kotlin.internal\n@n// (a - b) mod c\nprivate fun
differenceModulo(a: UInt, b: UInt, c: UInt): UInt {\n    val ac = a % c\n    val bc = b % c\n    return if (ac >= bc) ac -
bc else ac - bc + c\n}\n\nprivate fun differenceModulo(a: ULong, b: ULong, c: ULong): ULong {\n    val ac = a %
c\n    val bc = b % c\n    return if (ac >= bc) ac - bc else ac - bc + c\n}\n\n/**\n * Calculates the final element of a
bounded arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end]
in case of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed
parameters is performed. The given parameters should satisfy the condition:\n *\n * - either `step > 0` and `start <=
end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end
ending bound for the progression\n * @param step increment, or difference of successive elements in the
progression\n * @return the final element of the progression\n * @suppress\n
*\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun getProgressionLastElement(start: UInt, end: UInt, step:
Int): UInt = when {\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start, step.toUInt())\n
step < 0 -> if (start <= end) end else end + differenceModulo(start, end, (-step).toUInt())\n    else -> throw
kotlin.IllegalArgumentException("Step is zero.")\n}\n\n/**\n * Calculates the final element of a bounded
arithmetic progression, i.e. the last element of the progression which is in the range\n * from [start] to [end] in case
of a positive [step], or from [end] to [start] in case of a negative\n * [step].\n *\n * No validation on passed
parameters is performed. The given parameters should satisfy the condition:\n *\n * - either `step > 0` and `start <=
end`,\n * - or `step < 0` and `start >= end`.\n *\n * @param start first element of the progression\n * @param end
ending bound for the progression\n * @param step increment, or difference of successive elements in the
progression\n * @return the final element of the progression\n * @suppress\n
*\n@PublishedApi\n@SinceKotlin("1.3")\ninternal fun getProgressionLastElement(start: ULong, end: ULong,
step: Long): ULong = when {\n    step > 0 -> if (start >= end) end else end - differenceModulo(end, start,
step.toULong())\n    step < 0 -> if (start <= end) end else end + differenceModulo(start, end, (-step).toULong())\n
else -> throw kotlin.IllegalArgumentException("Step is zero.")\n}\n", "\n * Copyright 2010-2021 JetBrains s.r.o.
and Kotlin Programming Language contributors.\n * Use of this source code is governed by the Apache 2.0 license
that can be found in the license/LICENSE.txt file.\n *\n@n\n@file:kotlin.jvm.JvmName("UStringsKt") // string
representation of unsigned numbers\n\npackage kotlin.text\n\n/**\n * Returns a string representation of this [Byte]
value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for
number to string conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n\npublic /*inline*/ fun UByte.toString(radix: Int): String = this.toInt().toString(radix)\n\n/**\n * Returns a string
representation of this [Short] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix]
is not a valid radix for number to string conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n@kotlin.internal.InlineOnly\n\npublic /*inline*/ fun UShort.toString(radix: Int): String = this.toInt().toString(radix)\n\n\n/**\n * Returns a string
representation of this [Int] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is

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not a valid radix for number to string conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n//@kotlin.internal.InlineOnly\n\npublic /*inline*/ fun UInt.toString(radix: Int): String = this.toLong().toString(radix)\n\n/**\n * Returns a string representation of this [Long] value in the specified [radix].\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for number to string conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nULong.toString(radix: Int): String = ulongToString(this.toLong(), checkRadix(radix))\n\n/**\n * Parses the string as a signed [UByte] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUByte():\n\nUByte = toUByteOrNull() ?: numberFormatException(this)\n\n/**\n * Parses the string as a signed [UByte] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toUByte(radix: Int): UByte = toUByteOrNull(radix) ?: numberFormatException(this)\n\n/**\n * Parses the string as a [UShort] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUShort():\n\nUShort = toUShortOrNull() ?: numberFormatException(this)\n\n/**\n * Parses the string as a [UShort] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n *\n * @throws IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toUShort(radix: Int): UShort = toUShortOrNull(radix) ?: numberFormatException(this)\n\n/**\n * Parses the string as an [UInt] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toUInt():\n\nUInt = toUIntOrNull() ?: numberFormatException(this)\n\n/**\n * Parses the string as an [UInt] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n *\n * @throws\n\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toUInt(radix: Int): UInt = toUIntOrNull(radix) ?: numberFormatException(this)\n\n/**\n * Parses the string as a [ULong] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun String.toULong():\n\nULong = toULongOrNull() ?: numberFormatException(this)\n\n/**\n * Parses the string as a [ULong] number and returns the result.\n *\n * @throws NumberFormatException if the string is not a valid representation of a number.\n *\n * @throws\n\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toULong(radix: Int): ULong = toULongOrNull(radix) ?: numberFormatException(this)\n\n/**\n * Parses the string as an [UByte] number and returns the result\n *\n * or `null` if the string is not a valid representation of a number.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toUByteOrNull(): UByte? = toUByteOrNull(radix = 10)\n\n/**\n * Parses the string as an [UByte] number and returns the result\n *\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws\n\nIllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n */\n\n*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\n\npublic fun\n\nString.toUByteOrNull(radix: Int): UByte? {\n\n    val int = this.toUIntOrNull(radix) ?: return null\n\n    if (int > UByte.MAX_VALUE) return null\n\n    return int.toUByte()\n}\n\n/**\n * Parses the string as an [UShort] number and returns the result\n *\n * or `null` if the string is not a valid representation of a number.\n */

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*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUShortOrNull(): UShort? = toUShortOrNull(radix = 10)\n\n/**\n * Parses the string as an [UShort] number
and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUShortOrNull(radix: Int): UShort? {\n    val int = this.toUIntOrNull(radix) ?: return null\n    if (int >
UShort.MAX_VALUE) return null\n    return int.toUShort()\n}\n\n/**\n * Parses the string as an [UInt] number and
returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUIntOrNull(): UInt? = toUIntOrNull(radix = 10)\n\n/**\n * Parses the string as an [UInt] number and
returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toUIntOrNull(radix: Int): UInt? {\n    checkRadix(radix)\n\n    val length = this.length\n    if (length == 0)
return null\n\n    val limit: UInt = UInt.MAX_VALUE\n    val start: Int\n\n    val firstChar = this[0]\n    if (firstChar
< '0') {\n        if (length == 1 || firstChar != '+') return null\n        start = 1\n    } else {\n        start = 0\n    }\n\n    val
limitForMaxRadix = 119304647u // limit / 36\n\n    var limitBeforeMul = limitForMaxRadix\n    val uradix =
radix.toUInt()\n    var result = 0u\n    for (i in start until length) {\n        val digit = digitOf(this[i], radix)\n\n        if
(digit < 0) return null\n        if (result > limitBeforeMul) {\n            if (limitBeforeMul == limitForMaxRadix) {\n
                limitBeforeMul = limit / uradix\n\n                if (result > limitBeforeMul) {\n                    return null\n
                }\n            } else {\n                return null\n            }\n        }\n\n        result *= uradix\n\n        val beforeAdding =
result\n        result += digit.toUInt()\n        if (result < beforeAdding) return null // overflow has happened\n    }\n\n    return result\n}\n\n/**\n * Parses the string as an [ULong] number and returns the result\n * or `null` if the string is
not a valid representation of a number.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toULongOrNull(): ULong? = toULongOrNull(radix = 10)\n\n/**\n * Parses the string as an [ULong] number
and returns the result\n * or `null` if the string is not a valid representation of a number.\n *\n * @throws
IllegalArgumentException when [radix] is not a valid radix for string to number conversion.\n
*\n@SinceKotlin("1.5")\n@WasExperimental(ExperimentalUnsignedTypes::class)\npublic fun
String.toULongOrNull(radix: Int): ULong? {\n    checkRadix(radix)\n\n    val length = this.length\n    if (length ==
0) return null\n\n    val limit: ULong = ULong.MAX_VALUE\n    val start: Int\n\n    val firstChar = this[0]\n    if
(firstChar < '0') {\n        if (length == 1 || firstChar != '+') return null\n        start = 1\n    } else {\n        start = 0\n
    }\n\n    val limitForMaxRadix = 512409557603043100uL // limit / 36\n\n    var limitBeforeMul =
limitForMaxRadix\n    val uradix = radix.toULong()\n    var result = 0uL\n    for (i in start until length) {\n        val
digit = digitOf(this[i], radix)\n\n        if (digit < 0) return null\n        if (result > limitBeforeMul) {\n            if
(limitBeforeMul == limitForMaxRadix) {\n                limitBeforeMul = limit / uradix\n\n                if (result >
limitBeforeMul) {\n                    return null\n                }\n            } else {\n                return null\n            }\n
        }\n\n        result *= uradix\n\n        val beforeAdding = result\n        result += digit.toUInt()\n        if (result <
beforeAdding) return null // overflow has happened\n    }\n\n    return result\n}\n\n"/**\n * Copyright 2010-2018
JetBrains s.r.o. and Kotlin Programming Language contributors.\n * Use of this source code is governed by the
Apache 2.0 license that can be found in the license/LICENSE.txt file.\n
*\n@file:Suppress("INVISIBLE_REFERENCE", "INVISIBLE_MEMBER")\npackage kotlin\n\nimport
kotlin.annotation.AnnotationTarget.\n\nimport kotlin.internal.RequireKotlin\n\nimport
kotlin.internal.RequireKotlinVersionKind\n\n/**\n * Marks the API that is dependent on the experimental unsigned
types, including those types themselves.\n *\n * Usages of such API will be reported as warnings unless an explicit
opt-in with\n * the [OptIn] annotation, e.g. `@OptIn(ExperimentalUnsignedTypes::class)`\n * or with the `-Xopt-
in=kotlin.ExperimentalUnsignedTypes` compiler option is given.\n *\n * It's recommended to propagate the
experimental status to the API that depends on unsigned types by annotating it with this annotation.\n

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*^@Suppress("DEPRECATION")^@Experimental(level =
Experimental.Level.WARNING)^@RequiresOptIn(level =
RequiresOptIn.Level.WARNING)^@MustBeDocumented^@Target(CLASS, ANNOTATION_CLASS,
PROPERTY, FIELD, LOCAL_VARIABLE, VALUE_PARAMETER, CONSTRUCTOR, FUNCTION,
PROPERTY_GETTER, PROPERTY_SETTER,
TYPEALIAS)^@Retention(AnnotationRetention.BINARY)^@RequireKotlin("1.2.50", versionKind =
RequireKotlinVersionKind.COMPILER_VERSION)^@public annotation class ExperimentalUnsignedTypes^"/^*^
* Copyright 2010-2018 JetBrains s.r.o. and Kotlin Programming Language contributors.^* Use of this source code
is governed by the Apache 2.0 license that can be found in the license/LICENSE.txt file.^
*^@file:kotlin.jvm.JvmMultifileClass^@file:kotlin.jvm.JvmName("MathKt")^@n^@npackage
kotlin.math^@n^@n^@n// constants, can't use them from nativeMath as they are not constants there^@n^@n/** Ratio of the
circumference of a circle to its diameter, approximately 3.14159. ^@SinceKotlin("1.2")^@n^@public const val PI:
Double = 3.141592653589793^@n^@n/** Base of the natural logarithms, approximately 2.71828.
^@SinceKotlin("1.2")^@n^@public const val E: Double = 2.718281828459045^@n^@n// region =====
Double Math =====^@n^@n/** Computes the sine of the angle [x]
given in radians.^@n^@n * Special cases:^@n * - `sin(NaN|+Inf|-Inf)` is `NaN`^@n^@SinceKotlin("1.2")^@n^@public
expect fun sin(x: Double): Double^@n^@n/** Computes the cosine of the angle [x] given in radians.^@n^@n * Special
cases:^@n * - `cos(NaN|+Inf|-Inf)` is `NaN`^@n^@SinceKotlin("1.2")^@n^@public expect fun cos(x: Double):
Double^@n^@n/** Computes the tangent of the angle [x] given in radians.^@n^@n * Special cases:^@n * - `tan(NaN|+Inf|-
Inf)` is `NaN`^@n^@SinceKotlin("1.2")^@n^@public expect fun tan(x: Double): Double^@n^@n^@n * Computes the arc
sine of the value [x];^@n^@n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.^@n^@n * Special
cases:^@n * - `asin(x)` is `NaN`, when `abs(x) > 1` or x is `NaN`^@n^@SinceKotlin("1.2")^@n^@public expect fun
asin(x: Double): Double^@n^@n^@n * Computes the arc cosine of the value [x];^@n^@n * the returned value is an angle in
the range from `0.0` to `PI` radians.^@n^@n * Special cases:^@n * - `acos(x)` is `NaN`, when `abs(x) > 1` or x is
`NaN`^@n^@SinceKotlin("1.2")^@n^@public expect fun acos(x: Double): Double^@n^@n^@n * Computes the arc tangent
of the value [x];^@n^@n * the returned value is an angle in the range from `-PI/2` to `PI/2` radians.^@n^@n * Special cases:^@n
 * - `atan(NaN)` is `NaN`^@n^@SinceKotlin("1.2")^@n^@public expect fun atan(x: Double): Double^@n^@n^@n *
Returns the angle `theta` of the polar coordinates `(r, theta)` that correspond^@n^@n * to the rectangular coordinates `(x,
y)` by computing the arc tangent of the value [y] / [x];^@n^@n * the returned value is an angle in the range from `-PI` to
`PI` radians.^@n^@n * Special cases:^@n * - `atan2(0.0, 0.0)` is `0.0`^@n * - `atan2(0.0, x)` is `0.0` for `x > 0` and `PI`
for `x < 0`^@n * - `atan2(-0.0, x)` is `-0.0` for `x > 0` and `-PI` for `x < 0`^@n * - `atan2(y, +Inf)` is `0.0` for `0 < y <
+Inf` and `-0.0` for `-Inf < y < 0`^@n * - `atan2(y, -Inf)` is `PI` for `0 < y < +Inf` and `-PI` for `-Inf < y < 0`^@n * -
`atan2(y, 0.0)` is `PI/2` for `y > 0` and `-PI/2` for `y < 0`^@n * - `atan2(+Inf, x)` is `PI/2` for finite `x`^@n * -
`atan2(-Inf, x)` is `-PI/2` for finite `x`^@n * - `atan2(NaN, x)` and `atan2(y, NaN)` is `NaN`^@n
^@SinceKotlin("1.2")^@n^@public expect fun atan2(y: Double, x: Double): Double^@n^@n^@n * Computes the
hyperbolic sine of the value [x].^@n^@n * Special cases:^@n * - `sinh(NaN)` is `NaN`^@n * - `sinh(+Inf)` is `+Inf`^@n *
- `sinh(-Inf)` is `-Inf`^@n^@SinceKotlin("1.2")^@n^@public expect fun sinh(x: Double): Double^@n^@n^@n * Computes
the hyperbolic cosine of the value [x].^@n^@n * Special cases:^@n * - `cosh(NaN)` is `NaN`^@n * - `cosh(+Inf|-Inf)` is
`+Inf`^@n^@SinceKotlin("1.2")^@n^@public expect fun cosh(x: Double): Double^@n^@n^@n * Computes the hyperbolic
tangent of the value [x].^@n^@n * Special cases:^@n * - `tanh(NaN)` is `NaN`^@n * - `tanh(+Inf)` is `1.0`^@n * - `tanh(-
Inf)` is `-1.0`^@n^@SinceKotlin("1.2")^@n^@public expect fun tanh(x: Double): Double^@n^@n^@n * Computes the
inverse hyperbolic sine of the value [x].^@n^@n * The returned value is `y` such that `sinh(y) == x`.^@n^@n * Special
cases:^@n * - `asinh(NaN)` is `NaN`^@n * - `asinh(+Inf)` is `+Inf`^@n * - `asinh(-Inf)` is `-Inf`^@n
^@SinceKotlin("1.2")^@n^@public expect fun asinh(x: Double): Double^@n^@n^@n * Computes the inverse hyperbolic
cosine of the value [x].^@n^@n * The returned value is positive `y` such that `cosh(y) == x`.^@n^@n * Special cases:^@n *
- `acosh(NaN)` is `NaN`^@n * - `acosh(x)` is `NaN` when `x < 1`^@n * - `acosh(+Inf)` is `+Inf`^@n
^@SinceKotlin("1.2")^@n^@public expect fun acosh(x: Double): Double^@n^@n^@n * Computes the inverse hyperbolic
tangent of the value [x].^@n^@n * The returned value is `y` such that `tanh(y) == x`.^@n^@n * Special cases:^@n * -

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`tanh(NaN)` is `NaN` \* `tanh(x)` is `NaN` when `x > 1` or `x < -1` \* `tanh(1.0)` is `+Inf` \* `tanh(-1.0)` is `-Inf` \* `@SinceKotlin("1.2")` public expect fun `atanh(x: Double): Double` \* Computes `sqrt(x^2 + y^2)` without intermediate overflow or underflow. \* Special cases: \* - returns `+Inf` if any of arguments is infinite \* - returns `NaN` if any of arguments is `NaN` and the other is not infinite

`@SinceKotlin("1.2")` public expect fun `hypot(x: Double, y: Double): Double` \* Computes the positive square root of the value `[x]`. \* Special cases: \* - `sqrt(x)` is `NaN` when `x < 0` or `x` is `NaN`

`@SinceKotlin("1.2")` public expect fun `sqrt(x: Double): Double` \* Computes Euler's number `e` raised to the power of the value `[x]`. \* Special cases: \* - `exp(NaN)` is `NaN` \* - `exp(+Inf)` is `+Inf` \* - `exp(-Inf)` is `0.0`

`@SinceKotlin("1.2")` public expect fun `exp(x: Double): Double` \* Computes `exp(x) - 1`. \* This function can be implemented to produce more precise result for `[x]` near zero. \* Special cases: \* - `expm1(NaN)` is `NaN` \* - `expm1(+Inf)` is `+Inf` \* - `expm1(-Inf)` is `-1.0` \* @see `[exp]` function.

`@SinceKotlin("1.2")` public expect fun `expm1(x: Double): Double` \* Computes the logarithm of the value `[x]` to the given `[base]`. \* Special cases: \* - `log(x, b)` is `NaN` if either `x` or `b` are `NaN` \* - `log(x, b)` is `NaN` when `x < 0` or `b <= 0` or `b == 1.0` \* - `log(+Inf, +Inf)` is `NaN` \* - `log(+Inf, b)` is `+Inf` for `b > 1` and `-Inf` for `b < 1` \* - `log(0.0, b)` is `-Inf` for `b > 1` and `+Inf` for `b < 1` \* See also logarithm functions for common fixed bases: `[ln]`, `[log10]` and `[log2]`.

`@SinceKotlin("1.2")` public expect fun `log(x: Double, base: Double): Double` \* Computes the natural logarithm (base `E`) of the value `[x]`. \* Special cases: \* - `ln(NaN)` is `NaN` \* - `ln(x)` is `NaN` when `x < 0.0` \* - `ln(+Inf)` is `+Inf` \* - `ln(0.0)` is `-Inf`

`@SinceKotlin("1.2")` public expect fun `ln(x: Double): Double` \* Computes the common logarithm (base 10) of the value `[x]`. \* @see `[ln]` function for special cases.

`@SinceKotlin("1.2")` public expect fun `log10(x: Double): Double` \* Computes the binary logarithm (base 2) of the value `[x]`. \* @see `[ln]` function for special cases.

`@SinceKotlin("1.2")` public expect fun `log2(x: Double): Double` \* Computes `ln(x + 1)`. \* This function can be implemented to produce more precise result for `[x]` near zero. \* Special cases: \* - `ln1p(NaN)` is `NaN` \* - `ln1p(x)` is `NaN` where `x < -1.0` \* - `ln1p(-1.0)` is `-Inf` \* - `ln1p(+Inf)` is `+Inf` \* @see `[ln]` function \* @see `[expm1]` function

`@SinceKotlin("1.2")` public expect fun `ln1p(x: Double): Double` \* Rounds the given value `[x]` to an integer towards positive infinity. \* @return the smallest double value that is greater than or equal to the given value `[x]` and is a mathematical integer. \* Special cases: \* - `ceil(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.

`@SinceKotlin("1.2")` public expect fun `ceil(x: Double): Double` \* Rounds the given value `[x]` to an integer towards negative infinity. \* @return the largest double value that is smaller than or equal to the given value `[x]` and is a mathematical integer. \* Special cases: \* - `floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.

`@SinceKotlin("1.2")` public expect fun `floor(x: Double): Double` \* Rounds the given value `[x]` to an integer towards zero. \* @return the value `[x]` having its fractional part truncated. \* Special cases: \* - `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.

`@SinceKotlin("1.2")` public expect fun `truncate(x: Double): Double` \* Rounds the given value `[x]` towards the closest integer with ties rounded towards even integer. \* Special cases: \* - `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.

`@SinceKotlin("1.2")` public expect fun `round(x: Double): Double` \* Returns the absolute value of the given value `[x]`. \* Special cases: \* - `abs(NaN)` is `NaN` \* @see `absoluteValue` extension property for `[Double]`

`@SinceKotlin("1.2")` public expect fun `abs(x: Double): Double` \* Returns the sign of the given value `[x]`: \* - `-1.0` if the value is negative, \* - zero if the value is zero, \* - `1.0` if the value is positive

`@SinceKotlin("1.2")` public expect fun `sign(x: Double): Double` \* Returns the smaller of two values. \* If either value is `NaN`, then the result is `NaN`.

`@SinceKotlin("1.2")` public expect fun `min(a: Double, b: Double): Double` \* Returns the greater of two values. \* If either value is `NaN`, then the result is `NaN`.

`@SinceKotlin("1.2")` public expect fun `max(a: Double, b: Double): Double` // extensions \* Raises this value to the power `[x]`. \* Special cases: \* - `b.pow(0.0)` is `1.0` \* - `b.pow(1.0) == b`

`b.pow(NaN)` is `NaN` `n * - NaN.pow(x)` is `NaN` for `x != 0.0` `n * - b.pow(Inf)` is `NaN` for `abs(b) == 1.0` `n * - b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer `n * /n @SinceKotlin("1.2")\npublic expect fun Double.pow(x: Double): Double\n/n/**\n * Raises this value to the integer power [n].\n * See the other overload of [pow] for details.\n * /n @SinceKotlin("1.2")\npublic expect fun Double.pow(n: Int): Double\n/n/**\n * Returns the absolute value of this value.\n * Special cases:\n * - NaN.absoluteValue is NaN n * /n * @see abs function\n * /n @SinceKotlin("1.2")\npublic expect val Double.absoluteValue: Double\n/n/**\n * Returns the sign of this value:\n * - -1.0 if the value is negative,\n * - zero if the value is zero,\n * - 1.0 if the value is positive\n * Special case:\n * - NaN.sign is NaN n * /n @SinceKotlin("1.2")\npublic expect val Double.sign: Double\n/n/**\n * Returns this value with the sign bit same as of the [sign] value.\n * If [sign] is NaN the sign of the result is undefined.\n * /n @SinceKotlin("1.2")\npublic expect fun Double.withSign(sign: Double): Double\n/n/**\n * Returns this value with the sign bit same as of the [sign] value.\n * /n @SinceKotlin("1.2")\npublic expect fun Double.withSign(sign: Int): Double\n/n/**\n * Returns the ulp (unit in the last place) of this value.\n * An ulp is a positive distance between this value and the next nearest [Double] value larger in magnitude.\n * Special Cases:\n * - NaN.ulp is NaN n * - x.ulp is +Inf when x is +Inf or -Inf n * - 0.0.ulp is Double.MIN_VALUE n * /n @SinceKotlin("1.2")\npublic expect val Double.ulp: Double\n/n/**\n * Returns the [Double] value nearest to this value in direction of positive infinity.\n * /n @SinceKotlin("1.2")\npublic expect fun Double.nextUp(): Double\n/n/**\n * Returns the [Double] value nearest to this value in direction of negative infinity.\n * /n @SinceKotlin("1.2")\npublic expect fun Double.nextDown(): Double\n/n/**\n * Returns the [Double] value nearest to this value in direction from this value towards the value [to].\n * Special cases:\n * - x.nextTowards(y) is NaN if either x or y are NaN n * - x.nextTowards(x) == x n * /n @SinceKotlin("1.2")\npublic expect fun Double.nextTowards(to: Double): Double\n/n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Int].\n * Ties are rounded towards positive infinity.\n * Special cases:\n * - x.roundToInt() == Int.MAX_VALUE when x > Int.MAX_VALUE n * - x.roundToInt() == Int.MIN_VALUE when x < Int.MIN_VALUE n * /n * @throws IllegalArgumentException when this value is NaN n * /n @SinceKotlin("1.2")\npublic expect fun Double.roundToInt(): Int\n/n/**\n * Rounds this [Double] value to the nearest integer and converts the result to [Long].\n * Ties are rounded towards positive infinity.\n * Special cases:\n * - x.roundToLong() == Long.MAX_VALUE when x > Long.MAX_VALUE n * - x.roundToLong() == Long.MIN_VALUE when x < Long.MIN_VALUE n * /n * @throws IllegalArgumentException when this value is NaN n * /n @SinceKotlin("1.2")\npublic expect fun Double.roundToLong(): Long\n/n// endregion\n/n\n// region ===== Float Math =====\n/n/** Computes the sine of the angle [x] given in radians.\n * Special cases:\n * - sin(NaN|+Inf|-Inf) is NaN n * /n @SinceKotlin("1.2")\npublic expect fun sin(x: Float): Float\n/n/** Computes the cosine of the angle [x] given in radians.\n * Special cases:\n * - cos(NaN|+Inf|-Inf) is NaN n * /n @SinceKotlin("1.2")\npublic expect fun cos(x: Float): Float\n/n/** Computes the tangent of the angle [x] given in radians.\n * Special cases:\n * - tan(NaN|+Inf|-Inf) is NaN n * /n @SinceKotlin("1.2")\npublic expect fun tan(x: Float): Float\n/n/** Computes the arc sine of the value [x];\n * the returned value is an angle in the range from -PI/2 to PI/2 radians.\n * Special cases:\n * - asin(x) is NaN, when abs(x) > 1 or x is NaN n * /n @SinceKotlin("1.2")\npublic expect fun asin(x: Float): Float\n/n/** Computes the arc cosine of the value [x];\n * the returned value is an angle in the range from 0.0 to PI radians.\n * Special cases:\n * - acos(x) is NaN, when abs(x) > 1 or x is NaN n * /n @SinceKotlin("1.2")\npublic expect fun acos(x: Float): Float\n/n/** Computes the arc tangent of the value [x];\n * the returned value is an angle in the range from -PI/2 to PI/2 radians.\n * Special cases:\n * - atan(NaN) is NaN n * /n @SinceKotlin("1.2")\npublic expect fun atan(x: Float): Float\n/n/** Returns the angle theta of the polar coordinates (r, theta) that correspond\n * to the rectangular coordinates (x, y) by computing the arc tangent of the value [y] / [x];\n * the returned value is an angle in the range from -PI to PI radians.\n * Special cases:\n * - atan2(0.0, 0.0) is 0.0 n * - atan2(0.0, x) is 0.0 for x > 0 and PI for x < 0 n * - atan2(-0.0, x) is -0.0 for x > 0 and -PI for x < 0 n * - atan2(y, +Inf) is 0.0 for 0 < y <`

$+\text{Inf}$  and  $-0.0$  for  $-\text{Inf} < y < 0$   $\backslash$ n \*  $-\text{atan2}(y, -\text{Inf})$  is  $\text{PI}$  for  $0 < y < +\text{Inf}$  and  $-\text{PI}$  for  $-\text{Inf} < y < 0$   $\backslash$ n \*  $-\text{atan2}(y, 0.0)$  is  $\text{PI}/2$  for  $y > 0$  and  $-\text{PI}/2$  for  $y < 0$   $\backslash$ n \*  $-\text{atan2}(+\text{Inf}, x)$  is  $\text{PI}/2$  for finite  $x$   $\backslash$ n \*  $-\text{atan2}(-\text{Inf}, x)$  is  $-\text{PI}/2$  for finite  $x$   $\backslash$ n \*  $-\text{atan2}(\text{NaN}, x)$  and  $\text{atan2}(y, \text{NaN})$  is  $\text{NaN}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun atan2(y: Float, x: Float): Float\n\n/\*\*\n \* Computes the hyperbolic sine of the value [x].\n \* Special cases:\n \*  $-\text{sinh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{sinh}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{sinh}(-\text{Inf})$  is  $-\text{Inf}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun sinh(x: Float): Float\n\n/\*\*\n \* Computes the hyperbolic cosine of the value [x].\n \* Special cases:\n \*  $-\text{cosh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{cosh}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{cosh}(-\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun cosh(x: Float): Float\n\n/\*\*\n \* Computes the hyperbolic tangent of the value [x].\n \* Special cases:\n \*  $-\text{tanh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{tanh}(+\text{Inf})$  is  $1.0$   $\backslash$ n \*  $-\text{tanh}(-\text{Inf})$  is  $-1.0$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun tanh(x: Float): Float\n\n/\*\*\n \* Computes the inverse hyperbolic sine of the value [x].\n \* The returned value is `y` such that  $\text{sinh}(y) == x$ .  
 Special cases:\n \*  $-\text{asinh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{asinh}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{asinh}(-\text{Inf})$  is  $-\text{Inf}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun asinh(x: Float): Float\n\n/\*\*\n \* Computes the inverse hyperbolic cosine of the value [x].  
 The returned value is positive `y` such that  $\text{cosh}(y) == x$ .  
 Special cases:\n \*  $-\text{acosh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{acosh}(x)$  is  $\text{NaN}$  when  $x < 1$   $\backslash$ n \*  $-\text{acosh}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun acosh(x: Float): Float\n\n/\*\*\n \* Computes the inverse hyperbolic tangent of the value [x].  
 The returned value is `y` such that  $\text{tanh}(y) == x$ .  
 Special cases:\n \*  $-\text{tanh}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{tanh}(x)$  is  $\text{NaN}$  when  $x > 1$  or  $x < -1$   $\backslash$ n \*  $-\text{tanh}(1.0)$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{tanh}(-1.0)$  is  $-\text{Inf}$   $\backslash$ n

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun atanh(x: Float): Float\n\n/\*\*\n \* Computes  $\text{sqrt}(x^2 + y^2)$  without intermediate overflow or underflow.  
 Special cases:\n \* - returns  $+\text{Inf}$  if any of arguments is infinite  
 - returns  $\text{NaN}$  if any of arguments is  $\text{NaN}$  and the other is not infinite

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun hypot(x: Float, y: Float): Float\n\n/\*\*\n \* Computes the positive square root of the value [x].  
 Special cases:\n \*  $-\text{sqrt}(x)$  is  $\text{NaN}$  when  $x < 0$  or  $x$  is  $\text{NaN}$

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun sqrt(x: Float): Float\n\n/\*\*\n \* Computes Euler's number `e` raised to the power of the value [x].  
 Special cases:\n \*  $-\text{exp}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{exp}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{exp}(-\text{Inf})$  is  $0.0$

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun exp(x: Float): Float\n\n/\*\*\n \* Computes  $\text{exp}(x)$  - 1.  
 This function can be implemented to produce more precise result for [x] near zero.  
 Special cases:\n \*  $-\text{expm1}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{expm1}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{expm1}(-\text{Inf})$  is  $-1.0$

$\backslash$ n @see [exp] function.

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun expm1(x: Float): Float\n\n/\*\*\n \* Computes the logarithm of the value [x] to the given [base].  
 Special cases:\n \*  $-\text{log}(x, b)$  is  $\text{NaN}$  if either  $x$  or  $b$  are  $\text{NaN}$   $\backslash$ n \*  $-\text{log}(x, b)$  is  $\text{NaN}$  when  $x < 0$  or  $b \leq 0$  or  $b == 1.0$   $\backslash$ n \*  $-\text{log}(+\text{Inf}, +\text{Inf})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{log}(+\text{Inf}, b)$  is  $+\text{Inf}$  for  $b > 1$  and  $-\text{Inf}$  for  $b < 1$   $\backslash$ n \*  $-\text{log}(0.0, b)$  is  $-\text{Inf}$  for  $b > 1$  and  $+\text{Inf}$  for  $b > 1$

$\backslash$ n \* See also logarithm functions for common fixed bases: [ln], [log10] and [log2].

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun log(x: Float, base: Float): Float\n\n/\*\*\n \* Computes the natural logarithm (base `E`) of the value [x].  
 Special cases:\n \*  $-\text{ln}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{ln}(x)$  is  $\text{NaN}$  when  $x < 0.0$   $\backslash$ n \*  $-\text{ln}(+\text{Inf})$  is  $+\text{Inf}$   $\backslash$ n \*  $-\text{ln}(0.0)$  is  $-\text{Inf}$

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun ln(x: Float): Float\n\n/\*\*\n \* Computes the common logarithm (base 10) of the value [x].  
 @see [ln] function for special cases.

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun log10(x: Float): Float\n\n/\*\*\n \* Computes the binary logarithm (base 2) of the value [x].  
 @see [ln] function for special cases.

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun log2(x: Float): Float\n\n/\*\*\n \* Computes  $\text{ln}(a + 1)$ .  
 This function can be implemented to produce more precise result for [x] near zero.  
 Special cases:\n \*  $-\text{ln1p}(\text{NaN})$  is  $\text{NaN}$   $\backslash$ n \*  $-\text{ln1p}(x)$  is  $\text{NaN}$  where  $x < -1.0$   $\backslash$ n \*  $-\text{ln1p}(-1.0)$  is  $-\text{Inf}$   $\backslash$ n \*  $-\text{ln1p}(+\text{Inf})$  is  $+\text{Inf}$

$\backslash$ n \* @see [ln] function

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun ln1p(x: Float): Float\n\n/\*\*\n \* Rounds the given value [x] to an integer towards positive infinity.  
 @return the smallest Float value that is greater than or equal to the given value [x] and is a mathematical integer.  
 Special cases:\n \*  $-\text{ceil}(x)$  is  $x$  where  $x$  is  $\text{NaN}$  or  $+\text{Inf}$  or  $-\text{Inf}$  or already a mathematical integer.

$\backslash$ n @SinceKotlin("1.2")\npublic expect fun ceil(x: Float): Float\n\n/\*\*\n \* Rounds the given value [x] to an integer towards negative infinity.  
 @return the largest Float value that is smaller than or equal to the given value [x] and is a mathematical integer.  
 Special cases:\n \* -

`floor(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.  
`@SinceKotlin("1.2")` public expect fun `floor(x: Float): Float`: Rounds the given value `[x]` to an integer towards zero.  
`@return` the value `[x]` having its fractional part truncated.  
`Special cases:` `truncate(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.  
`@SinceKotlin("1.2")` public expect fun `truncate(x: Float): Float`: Rounds the given value `[x]` towards the closest integer with ties rounded towards even integer.  
`Special cases:` `round(x)` is `x` where `x` is `NaN` or `+Inf` or `-Inf` or already a mathematical integer.  
`@SinceKotlin("1.2")` public expect fun `round(x: Float): Float`: Returns the absolute value of the given value `[x]`.  
`Special cases:` `abs(NaN)` is `NaN`.  
`@see` `absoluteValue` extension property for `[Float]`.  
`@SinceKotlin("1.2")` public expect fun `abs(x: Float): Float`: Returns the sign of the given value `[x]`: `-1.0` if the value is negative, `0` if the value is zero, `1.0` if the value is positive.  
`Special case:` `sign(NaN)` is `NaN`.  
`@SinceKotlin("1.2")` public expect fun `sign(x: Float): Float`: Returns the smaller of two values.  
`Special cases:` If either value is `NaN`, then the result is `NaN`.  
`@SinceKotlin("1.2")` public expect fun `min(a: Float, b: Float): Float`: Returns the greater of two values.  
`Special cases:` If either value is `NaN`, then the result is `NaN`.  
`@SinceKotlin("1.2")` public expect fun `max(a: Float, b: Float): Float`: Raises this value to the power `[x]`.  
`Special cases:` `b.pow(0.0)` is `1.0`, `b.pow(1.0) == b`, `b.pow(NaN)` is `NaN`, `NaN.pow(x)` is `NaN` for `x != 0.0`, `b.pow(Inf)` is `NaN` for `abs(b) == 1.0`, `b.pow(x)` is `NaN` for `b < 0` and `x` is finite and not an integer.  
`@SinceKotlin("1.2")` public expect fun `Float.pow(x: Float): Float`: Raises this value to the integer power `[n]`.  
`See` the other overload of `[pow]` for details.  
`@SinceKotlin("1.2")` public expect fun `Float.pow(n: Int): Float`: Returns the absolute value of this value.  
`Special cases:` `NaN.absoluteValue` is `NaN`.  
`@see` `abs` function.  
`@SinceKotlin("1.2")` public expect val `Float.absoluteValue: Float`: Returns the sign of this value: `-1.0` if the value is negative, `0` if the value is zero, `1.0` if the value is positive.  
`Special case:` `NaN.sign` is `NaN`.  
`@SinceKotlin("1.2")` public expect val `Float.sign: Float`: Returns this value with the sign bit same as of the `[sign]` value.  
`Special cases:` If `[sign]` is `NaN` the sign of the result is undefined.  
`@SinceKotlin("1.2")` public expect fun `Float.withSign(sign: Float): Float`: Returns this value with the sign bit same as of the `[sign]` value.  
`@SinceKotlin("1.2")` public expect fun `Float.withSign(sign: Int): Float`: Rounds this `[Float]` value to the nearest integer and converts the result to `[Int]`.  
`Ties` are rounded towards positive infinity.  
`Special cases:` `x.roundToInt() == Int.MAX_VALUE` when `x > Int.MAX_VALUE`, `x.roundToInt() == Int.MIN_VALUE` when `x < Int.MIN_VALUE`.  
`@throws` `IllegalArgumentException` when this value is `NaN`.  
`@SinceKotlin("1.2")` public expect fun `Float.roundToInt(): Int`: Rounds this `[Float]` value to the nearest integer and converts the result to `[Long]`.  
`Ties` are rounded towards positive infinity.  
`Special cases:` `x.roundToLong() == Long.MAX_VALUE` when `x > Long.MAX_VALUE`, `x.roundToLong() == Long.MIN_VALUE` when `x < Long.MIN_VALUE`.  
`@throws` `IllegalArgumentException` when this value is `NaN`.  
`@SinceKotlin("1.2")` public expect fun `Float.roundToLong(): Long`: `endregion` region  
`==== Integer Math =====`  
`Returns` the absolute value of the given value `[n]`.  
`Special cases:` `abs(Int.MIN_VALUE)` is `Int.MIN_VALUE` due to an overflow.  
`@see` `absoluteValue` extension property for `[Int]`.  
`@SinceKotlin("1.2")` public expect fun `abs(n: Int): Int`: Returns the smaller of two values.  
`@SinceKotlin("1.2")` public expect fun `min(a: Int, b: Int): Int`: Returns the greater of two values.  
`@SinceKotlin("1.2")` public expect fun `max(a: Int, b: Int): Int`: Returns the absolute value of this value.  
`Special cases:` `Int.MIN_VALUE.absoluteValue` is `Int.MIN_VALUE` due to an overflow.  
`@see` `abs` function.  
`@SinceKotlin("1.2")` public expect val `Int.absoluteValue: Int`: Returns the sign of this value: `-1` if the value is negative, `0` if the value is zero, `1` if the value is positive.  
`@SinceKotlin("1.2")` public expect val `Int.sign: Int`: Returns the absolute value of the given value `[n]`.  
`Special cases:` `abs(Long.MIN_VALUE)` is `Long.MIN_VALUE` due to an



Z,OAAO,CAAE,GAAE,K;G;EAGf,MAAM,aAAc,GAAE,a;IACIB,OAAO,CAAE,YAAW,MAAM,KAAM,GAAE,CAAF,GAAM,MAAM,KAAM,WAAW,CAAC,CAAD,C;G;EAGhE,MAAM,YAAa,GAAE,a;IACjB,OAAO,CAAE,YAAW,MAAM,KAAM,GAAE,CAAC,MAAM,EAAT,GAAC,MAAM,YAAY,CAAC,CAAD,C;G;EAGpE,MAAM,cAAe,GAAE,a;IACnB,OAAO,MAAM,QAAQ,CAAC,MAAM,YAAY,CAAC,CAAD,CAAnB,C;G;EAGzB,MAAM,aAAc,GAAE,a;IACIB,OAAO,MAAM,OAAO,CAAC,MAAM,YAAY,CAAC,CAAD,CAAnB,C;G;EAGxB,MAAM,eAAgB,GAAE,a;IACpB,OAAO,CAAC,C;G;EAGZ,MAAM,aAAc,GAAE,a;IACIB,OAAO,MAAM,OAAO,CAAC,MAAM,YAAY,CAAC,CAAD,CAAnB,C;G;EAGxB,MAAM,YAAa,GAAE,a;IACjB,IAAI,CAAE,GAAE,UAAAR,C;MAAoB,OAAO,U;IAC3B,IAAI,CAAE,GAAE,WAAR,C;MAAqB,OAAO,W;IAC5B,OAAO,CAAE,GAAE,C;G;EAGf,MAAM,YAAa,GAAE,a;IACjB,IAAI,CAAE,IAAG,IAAT,C;MAAe,OAAO,C;IACtB,IAAI,CAAE,YAAW,MAAM,UAAvB,C;MAAmC,OAAO,C;IAC1C,OAAO,IAAI,MAAM,UAAV,CAAqB,CAArB,C;G;EAGX,MAAM,UAAW,GAAE,a;IACf,IAAI,CAAE,IAAG,IAAT,C;MAAe,OAAO,C;IACtB,OAAO,MAAM,OAAO,CAAC,CAAD,C;G;ECIDxB,MAAM,OAAQ,GAAE,sB;IACZ,IAAI,IAAK,IAAG,IAAZ,C;MACI,OAAO,IAAK,IAAG,I;KAGnB,IAAI,IAAK,IAAG,IAAZ,C;MACI,OAAO,K;KAGX,IAAI,IAAK,KAAL,IAAb,C;MACI,OAAO,IAAK,KAAL,I;KAGpB,IAAI,OAAO,IAAK,KAAL,QAAS,IAAG,OAAO,IAAI,OAAQ,KAAL,UAAvD,C;MACI,OAAO,IAAI,OAAO,CAAC,IAAD,C;KAGtB,IAAI,OAAO,IAAK,KAAL,QAAS,IAAG,OAAO,IAAK,KAAL,QAAhD,C;MACI,OAAO,IAAK,KAAL,IAAK,KAAL,IAAK,KAAL,CAAE,IAAG,CAAE,GAAE,IAAK,KAAL,CAAE,GAAE,IAAnC,C;KAGzB,OAAO,IAAK,KAAL,I;G;EAGpB,MAAM,SAAU,GAAE,e;IACd,IAAI,GAAL,IAAG,IAAX,C;MACI,OAAO,C;KAEX,IAAI,UAAU,OAAO,G;IACrB,IAAI,QAAS,KAAL,OAAjB,C;MACI,OAAO,UAAW,KAAL,OAAO,GAAAG,SAAU,GAAE,GAAG,SAAS,EAAd,GAAmB,iBAAiB,CAAC,GAAD,C;KAEf,IAAI,UAAW,KAAL,OAAAnB,C;MACI,OAAO,iBAAiB,CAAC,GAAD,C;KAE5B,IAAI,QAAS,KAAL,OAAjB,C;MACI,OAAO,MAAM,eAAe,CAAC,GAAD,C;KAEhC,IAAI,SAAU,KAAL,OAAiB,C;MACI,OAAO,MAAM,CAAC,GAAD,C;KAGjB,IAAI,MAAM,MAAM,CAAC,GAAD,C;IACHb,OAAO,iBAAiB,CAAC,GAAD,C;G;EAI5B,MAAM,SAAU,GAAE,a;IACd,IAAI,CAAE,IAAG,IAAT,C;MACI,OAAO,M;WAEN,IAAI,MAAM,WAAW,CAAC,CAAD,CAArB,C;MACD,OAAO,O;;MAGP,OAAO,CAAC,SAAS,E;;G;EAKzB,IAAI,WAAW,a;EAGf,IAAI,iCAAiC,sB;EAErC,gC;IACI,IAAI,EAEE,8BAA+B,IAAG,GAAPc,CAAJ,C;MACI,IAAI,OAAQ,IAAI,OAAO,EAAG,GAAE,QAAU,GAAE,C;MACxC,MAAM,eAAe,CAAC,GAAD,EAAM,8BAAN,EAAsC,QAAU,IAAV,cAA4B,KAA5B,CAAtC,C;KAEzB,OAAO,GAAAG,CAAC,8BAAD,C;G;EAGd,gC;IACI,IAAI,OAAO,C;IACX,KAAM,IAAI,IAAI,CAAb,EAAGB,CAAE,GAAE,GAAG,OAAvB,EAAGC,CAAC,EAAjC,C;MACI,IAAI,OAAQ,GAAG,WAAW,CAAC,CAAD,C;MAC1B,IAAM,GAAG,IAAK,GAAE,EAAG,GAAE,IAAM,GAAE,C;;IAEjC,OAAO,I;G;EAGX,MAAM,iBAakB,GAAE,iB;EC9C1B,MAAM,KAAM,GAAE,qB;IAKZ,IAAI,KAAM,GAAE,GAAL,GAAE,C;IAMiB,IAAI,MAAO,GAAE,IAAK,GAAE,C;G;EAGtB,MAAM,KAAM,WAAW,GAAE,OACf,OADe,cAET,MAFS,cAGV,EAHU,C;EAgBzB,MAAM,KAAM,UAAW,GAAE,E;EAQxB,MAAM,KAAM,QAAS,GAAE,iB;IACpB,IAAI,IAAK,IAAG,KAAM,IAAG,KAAM,GAAE,GAA7B,C;MACE,IAAI,YAAY,MAAM,KAAM,UAAU,CAAC,KAAD,C;MACrC,IAAI,SAAJ,C;QACE,OAAO,S;QAIX,IAAI,MAAM,IAAI,MAAM,KAAV,CAAGB,KAAM,GAAE,CAAxB,EA2B,KAAM,GAAE,CAAE,GAAE,EAf,GAAO,CAA5C,C;IACV,IAAI,IAAK,IAAG,KAAM,IAAG,KAAM,GAAE,GAA7B,C;MACE,MAAM,KAAM,KAAM,UAAU,CAAC,KAAD,CAAQ,GAAE,G;KAEjC,OAAO,G;G;EAYT,MAAM,KAAM,WAAW,GAAE,iB;IACvB,IAAI,KAAM,CAAC,KAAD,CAAT,C;MACE,OAAO,MAAM,KAAM,K;WACb,IAAI,KAAM,IAAG,CAAC,MAAM,KAAM,gBAazB,C;MACL,OAAO,MAAM,KAAM,U;WACb,IAAI,KAAM,GAAE,CAAE,IAAG,MAAM,KAAM,gBA5B,C;MACL,OAAO,MAAM,KAAM,U;WACb,IAAI,KAAM,GAAE,CAAZ,C;MACL,OAAO,MAAM,KAAM,WAAW,CAAC,CAAC,KAf,CAAQ,OAAO,E;;MAE5C,OAAO,IAAI,MAAM,KAAV,CACf,KAAM,GAAE,MAAM,KAAM,gBAakB,GAAE,CADrC,EAef,KAAM,GAAE,MAAM,KAAM,gBAakB,GAAE,CAFrC,C;;G;EAcX,MAAM,KAAM,SAAU,GAAE,6B;IACrB,OAAO,IAAI,MAAM,KAAV,CAAGB,OAAhB,EAyB,QAazB,C;G;EAWT,MAAM,KAAM,WAAW,GAAE,0B;IACvB,IAAI,GAAG,OAAQ,IAAG,CAAIb,C;MACE,MAAM,KAAM,CAAC,mCAAD,C;KAGb,IAAI,QAAQ,SAAU,IAAG,E;IACzB,IAAI,KAAM,GAAE,CAAE,IAAG,EAAG,GAAE,KAAtB,C;MACE,MAAM,KAAM,CAAC,sBAAuB,GAAE,KAA1B,C;KAGb,IAAI,GAAG,OAAO,CAAC,CAAD,CAAI,IAAG,GAARb,C;MACE,OAAO,MAAM,KAAM,WAAW,CAAC,GAAG,UAAU,CAAC,CAAD,CAAD,EAAMb,KAAnB,CAAyB,OAAO,E;WACxD,IAAI,GAAG,QAAQ,CAAC,GAAD,CAAM,IAAG,CAAxB,C;MACL,MAAM,KAAM,CAAC,+CAAgD,GAAE,GAAAnD,C;KAKb,IAAI,eAAe,MAAM,KAAM,WAAW,CAAC,IAAI,IA

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AR,C;UACvB,OAAO,M;;;WAGN,IAAI,KAAK,WAAW,CAAC,MAAM,KAAK,UAAZ,CAApB,C;MACL,OAAO

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WAAI,UAAI,KAAJ,CAAJ,C;;MAET,OAAO,I;K;IAGX,sC;MAOkB,Q;MAHd,WAAmB,wBAAR,OAAQ,EAAwB ,EAAxB,C;MACnB,IAAI,SAAQ,CAAZ,C;QAAe,OAAO,W;MAcTB,WAAW,iBAAGB,IAAhB,C;MACG,yB;MA Ad,OAAc,cAAAd,C;QAAc,uB;QACV,IAAK,WAAI,sBAAI,KAAJ,EAAJ,C;;MAET,OAAO,I;K;IAGX,wC;MAMw B,UACT,M;MAHX,aAAa,aAAa,SAAb,EAAmB,OAAQ,KAA3B,C;MACb,kBAaKB,C;MACE,yB;MAApB,OAAO B,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WAAL,C;;MAE5B,OAAO,M; K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,cAAU,OAAQ,KAAIB,C;MACb,kBAaKB,C;MACE,yB;MAApB,O AAOB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WAAL,C;;MAE5B,OAAO ,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,eAAW,OAAQ,KAAIB,C;MACb,kBAaKB,C;MACE,yB;MAA pB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WAAL,C;;MAE5B,O AAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,eAAS,OAAQ,KAAjB,C;MACb,kBAaKB,C;MACE,yB;M AApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WAAL,C;;MAE5 B,OAAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,iBAAU,OAAQ,KAAIB,C;MACb,kBAaKB,C;MACE, yB;MAApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WAAL,C;; MAE5B,OAAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,iBAAW,OAAQ,KAAIB,C;MACb,kBAaKB,C; MACE,yB;MAApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK,WA AL,C;;MAE5B,OAAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,iBAAY,OAAQ,KAApB,C;MACb,kBAA kB,C;MACE,yB;MAApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,UAAK ,WAAL,C;;MAE5B,OAAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,oBAAa,OAAQ,KAArB,C;MACb,k BAAKB,C;MACE,yB;MAApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAAwB,U AAK,WAAL,C;;MAE5B,OAAO,M;K;IAGX,0C;MAMwB,UACT,M;MAHX,aAAa,iBAAU,OAAQ,KAAIB,C;MA Cb,kBAaKB,C;MACE,yB;MAApB,OAAoB,cAApB,C;QAAoB,6B;QACbB,OAAO,oBAAP,EAAO,4BAAP,YAA wB,UAAK,WAAL,C;;MAE5B,OAAO,M;K;IAGX,0C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,yBAAY,CAA Z,EAAe,CAAf,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;I AGX,0C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,cAAU,CAAV,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB, EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,eAA W,CAAX,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX ,2C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,eAAS,CAAT,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA 2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,iBAAU,C AAV,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C; MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,iBAAW,CAAX,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA2 B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,iBAAY,CA AZ,C;MAC9B,OAAO,yBAAY,OAAQ,MAApB,EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C;M AII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,oBAAa,CAAb,C;MAC9B,OAAO,0BAAY,OAAQ,MAApB,EAA2B,O AAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,2C;MAII,IAAI,OAAQ,UAAZ,C;QAAuB,OAAO,iBAAU,CAAV ,C;MAC9B,OAAO,0BAAY,OAAQ,MAApB,EAA2B,OAAQ,aAAR,GAAuB,CAAvB,IAA3B,C;K;IAGX,4B;MAci B,Q;Mc3nJb,IAAI,EdqnJI,KAAK,CernJT,CAAJ,C;QACI,cdonJc,sD;QcnnJd,MAAM,gCAAYB,OAAQ,WAAjC,C; OdonJV,IAAI,MAAK,CAAT,C;QAAY,OAAO,W;MACnB,IAAI,KAAK,gBAAT,C;QAAe,OAAO,iB;MAcTB,IAA I,MAAK,CAAT,C;QAAY,OAAO,OAAO,UAAK,CAAL,CAAP,C;MACnB,YAAY,C;MACZ,WAAW,iBAAa,CA Ab,C;MACX,wBAAa,SAAb,gB;QAAa,WAAA,SAAb,M;QACI,IAAK,WAAI,IAAJ,C;QACL,IAAI,mCAAW,CA Af,C;UACI,K;;MAER,OAAO,I;K;IAGX,8B;MAciB,Q;McjpJb,IAAI,Ed2oJI,KAAK,Cc3oJT,CAAJ,C;QACI,cd0J c,sD;QczoJd,MAAM,gCAAYB,OAAQ,WAAjC,C;Od0oJV,IAAI,MAAK,CAAT,C;QAAY,OAAO,W;MACnB,IAA I,KAAK,gBAAT,C;QAAe,OAAO,mB;MAcTB,IAAI,MAAK,CAAT,C;QAAY,OAAO,OAAO,UAAK,CAAL,CAA P,C;MACnB,YAAY,C;MACZ,WAAW,iBAAGB,CAAhB,C;MACX,wBAAa,SAAb,gB;QAAa,WAAA,SAAb,M;Q ACI,IAAK,WAAI,IAAJ,C;QACL,IAAI,mCAAW,CAAf,C;UACI,K;;MAER,OAAO,I;K;IAGX,8B;MAciB,Q;Mcvq Jb,IAAI,EdiqJI,KAAK,CcjqJT,CAAJ,C;QACI,cdgqJc,sD;Qc/pJd,MAAM,gCAAYB,OAAQ,WAAjC,C;OdgqJV,IA AI,MAAK,CAAT,C;QAAY,OAAO,W;MACnB,IAAI,KAAK,gBAAT,C;QAAe,OAAO,mB;MAcTB,IAAI,MAAK, CAAT,C;QAAY,OAAO,OAAO,UAAK,CAAL,CAAP,C;MACnB,YAAY,C;MACZ,WAAW,iBAAiB,CAAJB,C;M ACX,wBAAa,SAAb,gB;QAAa,WAAA,SAAb,M;QACI,IAAK,WAAI,IAAJ,C;QACL,IAAI,mCAAW,CAAf,C;UA

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O1/UP,U;UADP,YP4/Ue,WO5/UH,WP4/UwB,GO5/UxB,C;UACL,IAAI,aAAJ,C;YACH,aP0/UuC,gB;YAA5B,W  
Oz/UX,aPy/UgC,GOz/UhC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UPs/UA,iB;UACA,IAAK,WAAI,OAAJ,C;;QAIQ  
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ACA,e;;YAEA,c;;UPwhVA,iB;UACA,IAAK,WAAI,oBAAJ,C;;QA5QT,OA8QO,W;O;KAiRX,C;sFAYA,yB;MA  
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,IAAK,WAjRyD,cAiRrD,CAAe,OAAf,CAAJ,C;;QAJRT,OAmRO,W;O;KA7RX,C;sFAaA,yB;MAAA,wE;MAmR  
A,+D;MAmRA,yD;QAUW,kBAAU,oB;QAmRD,Q;QAAhB,iD;UAAgB,cAAhB,e;UACI,UApRiD,WAoRvC,CAA  
Y,OAAZ,C;UOhkVP,U;UADP,YPkkVe,WOkVH,WPkkVwB,GOlkVxB,C;UACL,IAAI,aAAJ,C;YACH,aPkgVuC  
,gB;YAA5B,WO/jVX,aP+jVgC,GO/jVhC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UP4jVA,iB;UACA,IAAK,WAtRy  
D,cAsRrD,CAAe,OAAf,CAAJ,C;;QATRT,OAwRO,W;O;KAISX,C;uFAaA,yB;MAAA,wE;MAwRA,+D;MAxRA,  
yD;QAUW,kBAAU,oB;QAwRD,Q;QAAhB,iD;UAAgB,cAAhB,e;UACI,UAzRiD,WAYRvC,CAAY,OAAZ,C;UOI  
IVP,U;UADP,YPolVe,WOpIVH,WPoIVwB,GOpIVxB,C;UACL,IAAI,aAAJ,C;YACH,aPkiVuC,gB;YAA5B,WOjI  
VX,aPiIVgC,GOjIVhC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UP8kVA,iB;UACA,IAAK,WA3RyD,cA2RrD,CAAe,  
OAAf,CAAJ,C;;QA3RT,OA6RO,W;O;KAvSX,C;uFAaA,yB;MAAA,wE;MA6RA,+D;MA7RA,yD;QAUW,kBAA  
U,oB;QA6RD,Q;QAAhB,iD;UAAgB,cAAhB,e;UACI,UA9RiD,WA8RvC,CAAY,OAAZ,C;UOpmVP,U;UADP,Y  
PsmVe,WOTmVH,WPsmVwB,GOtmVxB,C;UACL,IAAI,aAAJ,C;YACH,aPomVuC,gB;YAA5B,WOnmVX,aPmm  
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hC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UPknVA,iB;UACA,IAAK,WArSyD,cAqSrD,CAAe,OAAf,CAAJ,C;;QAr  
ST,OAuSO,W;O;KAjTX,C;uFAaA,yB;MAAA,wE;MAuSA,+D;MAvSA,yD;QAUW,kBAAU,oB;QAUdSD,Q;QAAh  
B,iD;UAAgB,cAAhB,e;UACI,UAxSiD,WAwSvC,CAAY,OAAZ,C;UOxoVP,U;UADP,YP0oVe,WO1oVH,WP0o  
VwB,GO1oVxB,C;UACL,IAAI,aAAJ,C;YACH,aPwoVuC,gB;YAA5B,WOvoVX,aPuoVgC,GOvoVhC,EAAS,MA  
AT,C;YACA,e;;YAEA,c;;UPooVA,iB;UACA,IAAK,WA1SyD,cA0SrD,CAAe,OAAf,CAAJ,C;;QA1ST,OA4SO,W  
;O;KAiTX,C;uFAaA,yB;MAAA,wE;MA4SA,+D;MA5SA,yD;QAUW,kBAAU,oB;QA4SD,Q;QAAhB,iD;UAAgB,  
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;YAEA,c;;UPspVA,iB;UACA,IAAK,WA/SyD,cA+SrD,CAAe,OAAf,CAAJ,C;;QA/ST,OAiTO,W;O;KA3TX,C;uF  
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VA,iB;UACA,IAAK,WApTyD,cAoTrD,CAAe,OAAf,CAAJ,C;;QApTT,OAsTO,W;O;KAhUX,C;uFAaA,yB;MAA  
A,wE;MAStA,oC;MAAA,+D;MAAA,gC;MAiTA,yD;QAUW,kBAAU,oB;QAsTD,Q;QAAhB,iD;UAAgB,cAAhB,  
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,c;;UPOrVA,iB;UACA,IAAK,WazTyD,cAyTrD,CAAe,oBAAf,CAAJ,C;;QAZTT,OA2TO,W;O;KArUX,C;uFAaA,  
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C,gB;YAA5B,WOn5UX,aPm5UgC,GOn5UhC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UPg5UA,iB;UACA,IAAK,W

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T,C;YACA,e;;YAEA,c;;UPi6UA,iB;UACA,IAAK,WAAI,OAAJ,C;;QAET,OAAO,W;O;KAdX,C;0FAiBA,yB;MA  
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CA,e;;YAEA,c;;UPm8UA,iB;UACA,IAAK,WAAI,OAAJ,C;;QAET,OAAO,W;O;KAdX,C;0FAiBA,yB;MAAA,+  
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B,C;UACL,IAAI,aAAJ,C;YACH,aPy+UuC,gB;YAA5B,Wox+UX,aPw+UgC,GOx+UhC,EAAS,MAAT,C;YACA,  
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/UX,aPy/UgC,GOz/UhC,EAAS,MAAT,C;YACA,e;;YAEA,c;;UPs/UA,iB;UACA,IAAK,WAAI,OAAJ,C;;QAET,O  
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B,SAAhB,gB;UAAgB,cAAA,SAAhB,M;UACI,UAAU,YAAY,OAAZ,C;UO9iVP,U;UADP,YPgjVe,WohjVH,WP  
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AT,C;YACA,e;;YAEA,c;;UP0iVA,iB;UACA,IAAK,WAAI,eAAe,OAAf,CAAJ,C;;QAET,OAAO,W;O;KafX,C;0F  
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J,C;;QAET,OAAO,W;O;KafX,C;2FAkBA,yB;MAAA,+D;MAAA,sE;QAUoB,Q;QAaHb,wBAAgB,SAAhB,gB;U  
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B,SApyBV,CAAU,WAAV,EAAuB,OAAvB,C;YACd,MAAO,WAAI,WAAJ,C;;UAEX,qBAAO,M;;;QAiyBP,yB;  
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;UACI,WAAW,C;;MAGnB,OAAO,Q;K;IAGX,gC;MAOI,eAAe,oB;MACf,IAAI,CAAC,QAAS,UAAAd,C;QAAYB,  
OAAO,I;MACHc,UAAU,QAAS,O;MACnB,OAAO,QAAS,UAAhB,C;QACI,QAAQ,QAAS,O;QACjB,MFn+DG,  
MAAO,KEm+DE,GFn+DF,EE+DO,CFn+DP,C;;MEq+Dd,OAAO,G;K;IAGX,iC;MAOI,eAAe,oB;MACf,IAAI,C  
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Q,QAAS,O;QACjB,MF//DG,MAAO,KE+/DE,GF//DF,EE+/DO,CF//DP,C;;MEigEd,OAAO,G;K;IAGX,iC;MAKI,e  
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AgB,gC;QFuoGL,mBAAI,UEvoGiB,OFuoGjB,CAAJ,C;;MAEX,OAAO,Q;K;IAGX,kC;MAqBoB,gB;MAHhB,gB  
AXW,KAWW,O;MACtB,WAAW,iBF17FJ,MAAO,KE07FgB,mCAAwB,EAAXB,CF17FhB,EE07F6C,SF17F7C,C  
E07FH,C;MACX,QAAQ,C;MACQ,2B;MAAhB,OAAgB,cAAhB,C;QAAgB,yB;QACZ,IAAI,KAAK,SAAT,C;UA  
AoB,K;QACpB,IAAK,WAhBqB,GAgBP,OAHO,EAAnB,KAgBqB,CAAM,UAAN,EAAM,kBAAN,SAhBF,CAG  
BrB,C;;MAhBT,OAkBO,I;K;+EAfX,yB;MAAA,kF;MAAA,gE;MFv7FA,iB;MEu7FA,8C;QAWoB,UAESB,M;QA  
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O,OAfd,CAerB,C;;MAfT,OAiBO,I;K;+EAdX,yB;MAAA,kF;MAAA,gE;MFv9FA,iB;MEM9FA,8C;QAQI,YAAy,  
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B;MJ+oDA,sE;MF/yDA,iB;MMgKA,sC;QJ4pDI,eI/oDO,iBJ+oDQ,W;QACf,IAAI,CAAC,QAAS,UAAAd,C;UAAy  
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gB,yB;QAAM,IAAI,CAAC,UAAU,OAAV,CAAL,C;UAAyB,WAAy,WAAI,OAAJ,C;;MAC3D,OAAO,W;K;sFA  
GX,6C;MAQoB,Q;MAAA,2B;MAAhB,OAAgB,cAAhB,C;QAAgB,yB;QAAM,IAAI,UAAU,OAAV,CAAJ,C;UA  
AwB,WAAy,WAAI,OAAJ,C;;MAC1D,OAAO,W;K;IAGX,8B;MAWW,Q;MhBzgBP,IAAI,EgBwgBI,KAAK,Ch  
BxBT,CAAJ,C;QACI,cgBugBc,sD;QhBtgBd,MAAM,gCAAyB,OAAQ,WAAjC,C;OgBwgBN,UAAK,CAAL,C;Q  
AAU,sB;WACV,+C;QAAiC,OAAL,SAAK,cAAK,CAAL,C;;QACzB,wBAAa,SAAb,EAAmB,CAAnB,C;MAHZ,  
W;K;IAOJ,2C;MAQi,OAAO,sBAAkB,SAAiB,EAAwB,SAAxB,C;K;IAWA,2C;MAAA,8B;K;8CACH,Y;MACI,i  
BAA6B,iBAAZ,gBAAy,C;MACIB,QAAX,UAAW,C;MACX,OAAO,UAAW,W;K;;IAZ9B,6B;MAQi,0C;K;sFAS  
J,yB;MAAA,sD;MdfjA,sC;MAAA,oC;MAAA,uBAOe,yB;QArEf,8D;eAqEe,4B;UAAA,uB;YAAU,eAAsB,gB;YA

AtB,OA5Dd,cAAc,SA4DgB,CA5DhB,CAAd,EAA2B,SA4DM,CA5DN,CAA3B,C;W;S;OA4DI,C;Mc0ef,sC;QAU  
I,OOAO,sBdpfP,eAAW,iBcofiB,QdpfjB,CAAX,CcofO,C;O;KAVX,C;OGAAa,yB;MAAA,sD;Md3eA,sC;MAAA,o  
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,CAAd,EAA2B,SA+EM,CA/EN,CAA3B,C;W;S;OA+EI,C;Mcoef,sC;QAQI,OOAO,sBd5eP,eAAW,2Bc4e2B,Qd5e  
3B,CAAX,Cc4eO,C;O;KARX,C;IAWA,uC;MAQI,OOAO,wBAAW,cAAAX,C;K;IAWA,uE;MAAA,sC;MAAA,4C;  
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AEhB,OOAO,W;K;iGAGX,+D;MAYoB,Q;MAAA,2B;MAAhB,OOAgB,cAAhB,C;QAAGB,yB;QACZ,WAAy,a  
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;K;kGAG1B,yB;MAAA,wE;MAAA,oC;QASiB,UAAgC,M;QAD7C,YAAAY,C;QACC,2B;QAAb,OAAa,cAAb,C;U  
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,C;;MAEX,OAAO,G;K;iFAGX,+B;MAYoB,Q;MADhB,UAAe,C;MACC,2B;MAAhB,OAAgB,cAAhB,C;QAAgB,  
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AAI,OAAJ,C;;YAEN,MAAO,WAAL,OAAJ,C;;QAGf,OAAO,cAAK,KAAL,EAAZ,MAAZ,C;O;KANBX,C;IASB  
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GR,sBAAO,E;;;QsCryBP,0B;O;KAPJ,C;iGAUA,yB;MAAA,sC;MIC3dA,iC;MkC2dA,0BAOGC,yB;QIClehC,iC;ek  
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gB/B,+B;eoC6gB+B,6B;UAAA,qB;YAAE,yBpCngBS,eoCmgBC,EpCngBD,CoCmgBT,C;W;S;OAAF,C;MAP/B,  
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A8EyB,EAawB,EAaxB,CpB/yTtB,EoB+yTmD,SpB/yTnD,CoB+yTH,C;MACX,QAAQ,C;MACQ,OAhFL,KAGF  
K,W;MAAhB,OAAgB,cAAhB,C;QAAGB,yB;QACZ,IAAI,KAAK,SAAT,C;UAAoB,K;QACpB,IAAK,WAlFqB,G  
AkFP,uBAAK,UAAAL,EAAK,kBAAL,UAlFO,EAKFl,OAlFJ,CakFrB,C;;MAIFT,OAoFO,I;K;+EAjFX,yB;MAAA,  
kF;MAAA,gE;MpB1uTA,iB;MoB0uTA,8C;QAcOB,UAEY,M;QAL5B,gBAAGB,c;QChB,WAAW,epBhvTJ,MA  
AO,KoBgvTsB,wBAAN,KAAM,EAawB,EAaxB,CpBhvTtB,EoBgvTmD,SpBhvTnD,CoBgvTH,C;QACX,QAAQ  
,C;QACQ,uB;QAAhB,OAAgB,cAAhB,C;UAAgB,yB;UACZ,IAAI,KAAK,SAAT,C;YAAoB,K;UACpB,IAAK,W  
AAI,UAAU,uBAAK,UAAAL,EAAK,kBAAL,UAAV,EAAqB,OAARb,CAAJ,C;;QAET,OAAO,I;O;KAIBX,C;+EAq  
BA,yB;MAAA,kF;MAAA,gE;MpB/vTA,iB;MoB+vTA,8C;QAcOB,UAEY,M;QAL5B,gBAAGB,c;QChB,WAAW  
,epBrwTJ,MAAO,KoBqwTsB,wBAAN,KAAM,EAawB,EAaxB,CpBrwTtB,EoBqwTmD,SpBrwTnD,CoBqwTH,  
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ACpB,IAAK,WAAI,UAAU,uBAAK,UAAAL,EAAK,kBAAL,UAAV,EAAqB,OAARb,CAAJ,C;;QAET,OAAO,I;O;  
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C;YAAoB,K;UACpB,IAAK,WAAI,UAAU,uBAAK,UAAAL,EAAK,kBAAL,UAAV,EAAqB,OAARb,CAAJ,C;;QA

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G,4C;MAAA,gE;MAAuB,mCAAK,IAAL,C;MAAvB,Y;K;IAIyC,sC;8BAAwD,O;;K;;IACjG,yC;MAAA,6D;MAA  
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,IAAS,C;MAAT,S;QAAC,OWC/SF,KxC+SE,IA6/GT,gBAAR,iBAAQ,C;OA7/GT,U;MAAA,S;QAAA,SAAsC,sBw  
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,IAIG,OAAM,IAJT,IAKG,OAAM,IALT,IAMG,OAAM,KAPV,CAHJ,C;K;;;mCCTP,gB;;K;;ICAJ,wB;K;;IAIA,w  
B;K;;IAIA,wB;K;;IAKiC,uB;MAAC,oB;QAAA,OAA0B,E;MAA1B,gB;K;;IAEIC,kB;K;;IAqCqC,sB;MAAC,gB;K  
;;IAGCN,4B;MAAC,sB;K;;IAEjC,uB;K;;IA8DmC,4B;MAAC,kB;K;;IAEpC,oB;K;;ICpJA,oB;K;;IAIA,wB;K;;oF7  
DLA,qB;MAKqE,uCoChTb,E;K;iGpCK/C,yB;MAAA,kD;MAAA,4B;QAQsE,mBAAY,SAAZ,C;O;KARtE,C;IAU  
A,iC;MAGI,OAA sB,UAA Y,QAA vB,KAA mC,SAA 9C,GACe,UAA Y,UAD3B,GAGI,gBAAGB,UAAhB,C;K;IAG  
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,yB;MAAA,uE;MAAA,0C;QAIyC,gBAA9B,mBAAoB,QAAPB,C;QAAoC,aJtC3C,W;QIsCA,OJrCO,SiQcM,D,Q;  
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AE1B,iB;MAGe,UAGL,MAHK,EAMO,M;MAPIB,IAAI,KAAM,OAAN,GAAa,SAAjB,C;QACI,OAAO,2D;OAG  
c,gBAAXB,eAAK,SAAL,IAAK,gBAAL,yB;MxEuwBL,UAAU,SAAV,EwEwBsC,KxEuwBtC,EAD+F,CAC/F,E  
ADoH,CACpH,EADuI,gBACvI,C;MwErwBI,IAAI,KAAM,OAAN,GAAa,SAAjB,C;QACI,MAAM,SAAN,IAAc,6  
E;OAGIB,OAAO,K;K;kCAGX,Y;MACI,OAAO,EAAS,MAAM,MAAK,oBAAL,C;K;yCAI1B,Y;MACI,IAAI,yBA  
AJ,C;QAAgB,MAAM,oC;K;+CAG1B,iB;MACI,oCAAa,kCAAYB,SAAzB,C;MADoB,Y;K;wDAIrC,iB;MACI,oC  
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CkEMb,C;MAHrD,Y;K;ICrBJ,0C;MACI,IAAI,6BAAJ,C;QACU,KAAY,MAAK,UAAAL,C;;QAEIB,UAAU,KAAY  
,EAAwC,CAAxC,EAAiD,cAAN,KAAM,CAAjD,EAA4D,eAAW,UAAx,CAA5D,C;;K;IAMiB,kD;MAAA,uB;QA  
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ACX,KAAY,MAAK,UAAAL,C;;QAEIB,UAAU,KAAY,EAAwC,CAAxC,EAAiD,cAAN,KAAM,CAAjD,EAA4D,  
UAA5D,C;;K;IAIR,gE;MACI,IAAI,aAAY,UAAU,CAAV,IAAZ,CAAJ,C;QACI,UAAU,KAAY,EAAwC,SAAXC,  
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K;IAF3C,0B;MACI,IAAI,6BAAJ,C;QACI,iBAAiB,gB;QACX,KAAY,MAAK,UAAAL,C;;QAEIB,UAAU,KAAY,E  
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AL,C;MACIB,mBAAc,CAAd,YAAAsB,KAAM,OAA5B,Y;QACI,QAAQ,MAAM,UAAQ,CAAR,IAAN,C;QACR,Q  
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AsC,OAAO,K;;MAEjD,4BAA4B,I;MAC5B,OAAO,I;K;IAIX,2D;MACI,aAAa,gBAAmB,KAAM,OAAzB,O;MAC  
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W,KAaf,C;QACI,aAAU,KAAY,OAAiB,YAAjB,M;UAA+B,MAAM,CAAN,IAAW,OAAO,CAAP,C;Q;IAIId,4D;  
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,WAAW,YAAU,KAAY,EAAiB,MAAjB,EAAyB,KAazB,EAAgC,MAAhC,EAAwC,UAAxC,C;MACX,YAAAY,Y  
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,OAAO,M;K;ICrGX,4C;MAMoB,UACM,M;MAHtB,IAAI,iBAAJ,C;QAAkB,OAAO,C;MACzB,aAAa,C;MACb,  
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,OAAQ,C;eACnC,sC;YAAmC,2BAAR,OAAQ,C;eACnC,uC;YAAmC,2BAAR,OAAQ,C;;YAEA,kBAAR,OAAQ,  
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A,iC;OAAA,2C;K;;MC0BA,iC;MAKA,8B;MA6CA,0BAAmE,I;;IAzEnE,kC;MAAA,oB;MAA+B,8C;K;2CAE3B,  
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5D,C;YAAwB,aAAO,I;YAAP,e;;QAC9C,aAAO,K;;MuEhnDgD,iB;K;kFAInD,Y;MACI,IAAI,+BAAJ,C;QACI,0  
BAAW,qB;OAEf,OAAO,sC;K;uCAGf,Y;MAAgF,iC;K;kCAEHf,e;MAA+C,OAAA,0BAAY,WAAI,GAAJ,C;K;o  
CAE3D,sB;MAAgD,OAAA,0BAAY,aAAI,GAAJ,EAAS,KAAT,C;K;qCAE5D,e;MAAyC,OAAA,0BAAY,cAAO,  
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,8BAAmB,W;MACnB,2BAAgB,WAAAY,S;MAFhC,Y;K;IAKA,+B;MAAA,iD;MAGuB,aAAK,kEAAL,Q;MAHvB

,Y;K;IAKA,4D;MAAA,iD;MAQ8D,qB;M7EpC9D,IAAI,E6EsCQ,mBAAmB,C7EtC3B,CAAJ,C;QACI,c6EqCgC,+C;Q7EpChC,MAAM,gCAAYB,OAAQ,WAAjC,C;OAFV,IAAI,E6EuCQ,cAAc,C7EvCtB,CAAJ,C;QACI,gB6EsC2B,yC;Q7ErC3B,MAAM,gCAAYB,SAAQ,WAAjC,C;O6E0BV,Y;K;IAcA,gD;MAAA,iD;MAA2C,eAAK,eAAL,EAAAsB,GAAAtB,Q;MAA3C,Y;K;IAGA,yC;MAAA,iD;MAG8C,qB;MAC1C,KAAK,gBAAO,QAAP,C;MAJT,Y;K;IAqCJ,4B;MAK8E,gBAAnE,aAAmB,gEAAAnB,C;MAA2E,wB;MAAIF,O1EvCO,S;K;;M2EjEP,uB;;kCAyCA,mB;MACI,UAAU,gBAAI,aAAI,OAAJ,EAAa,IAAb,C;MACd,OAAO,W;K;8BAGX,Y;MACI,gBAAI,Q;K;uCAOR,mB;MAA6D,OAAA,gBAAI,mBAAY,OAAZ,C;K;gCAEjE,Y;MAAYC,OAAA,gBAAI,U;K;iCAE7C,Y;MAAqD,OAAA,gBAAI,KAAK,W;K;qCAE9D,mB;MAAkD,OAAA,gBAAI,cAAO,OAAP,CAAJ,Q;K;+EAEpB,Y;MAAQ,OAAA,gBAAI,K;K;;IA5D1C,6B;MAAA,iD;MAGoB,8B;MAZxB,mB;MAaQ,oBAAM,gB;MAJV,Y;K;IAOA,yC;MAAA,iD;MAG2C,8B;MANB/C,mB;MAoBQ,oBAAM,eAAgB,QAAS,KAAzB,C;MACN,qBAAO,QAAP,C;MALJ,Y;K;IAQA,4D;MAAA,iD;MAQ2D,8B;MAhC/D,mB;MAiCQ,oBAAM,eAAgB,eAAhB,EAAiC,UAAjC,C;MATV,Y;K;IAYA,gD;MAAA,iD;MAA2C,eAAK,eAAL,EAAAsB,GAAAtB,Q;MAA3C,Y;K;IAEA,oC;MAAA,iD;MAM0C,8B;MA5C9C,mB;MA6CQ,oBAAW,G;MAPf,Y;K;IAmCJ,+B;MAKuC,gBAA5B,eAAQ,eAAR,C;MAAoC,6B;MAA3C,O3ENO,S;K;I4EzD6B,uC;MAAC,kC;MAErC,oBAAkC,kB;MACiC,sBAAYB,C;K;2EAHY,Y;MAAA,8B;K;2FAGRc,Y;MAAA,0B;K,OAAA,gB;MAAA,0B;K;gDAGA,sB;MACI,eAAe,aAAS,qBAA Y,GAAZ,C;MACxB,mBAAmB,6BAAsB,QAAtB,C;MACnB,IAAI,oBAAJ,C;QAEI,kBAAW,QAAX,IAAuB,mCAAY,GAAZ,EAAiB,KAAjB,C;QAEvB,IAAI,6BAAJ,C;UAEI,YAA+B,Y;UAC/B,IAAI,aAAS,gBAAO,KAAM,IAAb,EAakB,GAAIB,CAAb,C;YACI,OAAO,KAAM,gBAAS,KAAT,C;;YAEb,kBAAW,QAAX,IAAuB,CAAQ,KAAR,EAAe,mCAAY,GAAZ,EAAiB,KAAjB,CAAf,C;YACvB,6B;YACA,OAAO,I;;UAIX,YAAuC,Y;UACvC,cAAkB,wBAAN,KAAM,EAAiB,GAAjB,C;UACIB,IAAI,eAAJ,C;YACI,OAAO,OAAM,gBAAS,KAAT,C;WAEX,KAA Y,MAAK,mCAAY,GAAZ,EAAiB,KAAjB,CAAL,C;;MAG1B,6B;MAEA,OAAO,I;K;iDAGX,e;MAEuB,Q;MADnB,eAAe,aAAS,qBAA Y,GAAZ,C;MACL,oCAAsB,QAAtB,C;MAAA,iB;QAAMC,OAAO,I;OAA7D,mBAAmB,I;MACnB,IAAI,6BAAJ,C;QACI,YAAgC,Y;QACHC,IAAI,aAAS,gBAAO,KAAM,IAAb,EAakB,GAAIB,CAAb,C;U5BzDR,O4B0D6B,iB5B1DvB,C4B0DmC,Q5B1DnC,C;U4B2DM,6B;UACA,OAAO,KAAM,M;;UAEb,OAAO,I;;QAGX,YAAuC,Y;QACvC,8BAAc,KAAAd,iB;UACI,cAA Y,MAAM,KAAN,C;UACZ,IAAI,aAAS,gBAAO,GAAP,EAAY,OAAM,IAAIB,CAAb,C;YACI,IAAI,KAAM,OAAN,KAAc,CAAIB,C;CACU,KAAN,UAA2B,C;c5BtE/C,O4BwEqC,iB5BxE/B,C4BwE2C,Q5BxE3C,C;;c4B2EoB,KAA Y,QA AO,KAAP,EAAC,CAAd,C;;YAEtB,6B;YAEA,OAAO,OAAM,M;;MAIzB,OAAO,I;K;OCAGX,Y;MACI,oBAAa,kB;MACb,YAAO,C;K;mDAGX,e;MAAYC,uBAAS,GAAT,S;K;8CAEzC,e;MAA+B,Q;MAAA,+BAAS,GAAT,8B;K;+CAE/B,e;MACuB,Q;MAAA,oCAAsB,aAAS,qBAA Y,GAAZ,CAA/B,C;MAAA,iB;QAAoD,OAAO,I;OAA9E,mBAAmB,I;MACnB,IAAI,6BAAJ,C;QACI,YAAgC,Y;QACHC,IAAI,aAAS,gBAAO,KAAM,IAAb,EAakB,GAAIB,CAAb,C;UACI,OAAO,K;;UAEP,OAAO,I;;QAGX,YAAuC,Y;QACvC,OAAa,wBAAN,KAAM,EAAiB,GAAjB,C;;K;uDAlR,0B;MACI,sB;;Q7F+nCY,Q;QAAhB,iD;UAAgB,cAAhB,e;UAAAsB,I6F/nCK,aAAS,gB7F+nCA,O6F/nCa,IAAb,M7F+nCd,C;YAAwB,qBAAO,O;YAAP,uB;;QAC9C,qBAAO,I;;M6FhoCH,yB;K;IAIO,8E;MAAA,wD;MACH,aAA Y,E;MAEZ,YAA0B,MAAA,MAAK,qCAAL,C;MACvC,gBA Ae,E;MAEf,oBAA4B,I;MAC5B,eAAc,K;MACd,iBAAgB,E;MACHb,iBAAqC,I;K;yEAERc,Y;MACI,IAAI,6BAAwB,YAA5B,C;QACI,gBAAqB,iBAAqD,O;QAC1E,IAAI,4DAAC,SAAlB,C;UACI,OAAO,C;OAGf,IAAI,yDAAa,SAAK,OAAtB,C;QACI,oBAAe,2CAAW,UAAK,aAAL,CAAX,C;QACf,eAAU,iC;QACV,iBAA Y,C;QACZ,OAAO,C;;QAEp,oBAAe,I;QACf,OAAO,C;;K;mEAI,f,Y;MACI,IAAI,eAAS,EAAb,C;QACI,aAAQ,oB;MACZ,OAAO,eAAS,C;K;gEAGpB,Y;MAEOB,Q;MADhB,IAAI,CAAC,cAAL,C;QAAGB,MAAM,6B;MACN,IAAI,YAAJ,C;QACZ,yBAAqD,cAArD,C;;QAEa,OAAb,iB;;MAHJ,oB;MAKA,iBAAiB,S;MACjB,aAAQ,E;MACR,OAAO,S;K;kEAGX,Y;M/E/CR,I+EgDyB,c/EhDrB,QA AJ,C;QACI,cAhByB,0B;QAIbZB,MAAM,6BAAsB,OAAQ,WAA9B,C;O+E+CE,6BAAyB,cAAO,6BAA Y,IAAnB,C;MACzB,iBAA Y,I;MAEZ,uC;K;;6CatDZ,Y;MAEI,2D;K;4DAyDJ,oB;MACI,mBAAmB,kBAAW,QAAX,C;MACnB,OAAW,iBAAiB,SAArB,GAAgC,IAAhC,GAA0C,Y;K;;;wCCtKrD,Y;MACI,aAAR,MAAM,OAAe,CAAP,IAAO,C;MAEb,OAAO,KAAP,IAAgB,C;M7BXpB,O6BYqB,M7BZf,C6BYuB,K7BZvB,C;M6BaF,OAAO,M;K;;ICNuB,qC;MAAC,kC;MAEnC,oBAAkC,kB;MACiC,sBAAYB,C;K;yEAHU,Y;MAAA,8B;K;yFAGnC,Y;MAAA,0B;K,OAAA,gB;MAAA,0B;K;iDAWA,e;MACI,IAAI,0BAAJ,C;QAAoB,OAAO,K;MAC3B,OAAO,kBAAW,GAAX,MAAoB,S;K;4CAG/B,e;MACI,IAAI,0BAAJ,C;QAAoB,OAAO,I;MAC3B,YAA Y,kBAAW,GAAX,C;MACZ,OAAW,UAAU,SAArB,GAAgC,KAAhC,GAA2D,I;K;8CAI/D,sB;MjFVA,IAAI

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,IAAI,EkFvBc,eAAQ,IIFuBtB,CAAJ,C;QACI,cAdW,e;QAeX,MAAM,6BAAsB,OAAQ,WAA9B,C;OkFxBE,WA  
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,C;QACI,cAdW,e;QAeX,MAAM,6BAAsB,OAAQ,WAA9B,C;OkF0BN,YAAY,mB;MACZ,IAAI,SAAS,IAAb,C;  
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MACI,qB;MACA,kBAAl,Q;MACJ,sBAAO,I;K;gDASX,e;MAAmD,OAAA,kBAAl,mBAAY,GAZC,C;K;kDAEv  
D,iB;MACiC,Q;MAAA,0B;MAAA,iB;QAAQ,OAAO,K;OAA5C,WAA6B,I;;QAEzB,IAAI,OAAA,IAAK,MAAL,  
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K;0CAE/C,sB;MACI,qB;MAEA,UAAU,kBAAl,WAAI,GAJJ,C;MACd,IAAI,OAAO,IAAX,C;QACI,eAAe,mCA  
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AO,I;;QAEP,OAAO,GAAl,gBAAS,KAAT,C;;K;2CAInB,e;MACI,qB;MAEA,YAAY,kBAAl,cAAO,GAAP,C;MA  
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GuB,qB;MA9J3B,yB;MA+JQ,sBAAM,gB;MAJV,Y;K;IAOA,iD;MAAA,uD;MAAoD,qB;MAIKxD,yB;MAoKc,Q;  
MAAN,sBAAM,+D;MAFV,Y;K;IAKA,kE;MAAA,uD;MAQ8D,eAAM,eAAN,EAAuB,UAAvB,Q;MA/KIE,yB;M  
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EA,+C;MAAA,uD;MAG2C,qB;MaxL/C,yB;MAyLQ,sBAAM,gB;MACN,KAAK,gBAAO,QAAP,C;MALT,Y;K;I  
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;MAAgD,6B;MAAvD,OhFoBO,S;K;::;kFiFzEX,uB;MAQI,OAAO,O;K;ICXX,sB;K;mCACI,Y;MACI,mBAAM,IA  
AN,C;K;2CAGJ,mB;MACI,mBAAM,OAAN,C;MACA,c;K;iCAKJ,Y;K;IAKuB,oC;MAA8B,qB;MAA7B,gC;K;2  
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Y,C;K;qEAChB,4B;MAIkE,iBAAY,KAAZ,C;K;2EAEIE,qB;MAI8D,gB;K;ICIDb,2C;MAC7C,qBAAwC,Q;K;iDA  
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,WAAqB,K;MAC3L,QAAQ,E;MACR,EAAE,kBAAF,IAAwB,gB;MACxB,EAAE,QAAF,IAAc,M;MACd,EAAE,  
OAAF,IAAa,K;MACb,EAAE,SAAF,IAAe,O;MACf,EAAE,YAAF,IAAkB,U;MACIB,EAAE,UAAF,IAAgB,Q;MA  
ChB,OAAO,C;K;mFAU8E,qB;MAAQ,OAAG,E;K;+FAEL,qB;MAAQ,OAac,a;K;iFAE7B,qB;MAAQ,OAAO,M;  
K;yFAEX,qB;MAAQ,OAAW,U;K;+EAEvB,qB;MAAQ,OAAO,M;K;+EAEf,qB;MAAQ,OAAO,M;K;oErJlVg,yB  
;MAAA,kF;MAAA,0B;MAAA,uB;QAaI,IAAI,OAAO,CAAP,IAA8B,OAAO,KAAzC,C;UACI,MAAM,8BAAYB,  
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A,yF;K;;IAAA,0C;MAAA,a;aAAA,S;UAAA,+C;aAAA,O;UAAA,6C;gBAAA,8D;;K;;IAyBmC,sC;MACnC,8B;K  
;;IAMqC,sC;MACrC,8B;K;;IC1DJ,iC;K;;ICMA,4B;K;;IA6BA,gD;K;;IC5BA,qC;K;;IA4BA,+B;K;;ICRqC,uC;MA  
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,CAC/F,E8J1XgD,W9J0XhD,E8J1XiE,I9J0XjE,C;;Q8JzXW,IvKtT6C,CAAC,cuKsT9C,C;U9JyXX,U8JxXQ,kB9J  
wXR,E8JxX6B,I9JwX7B,E8JxXuD,C9JwXvD,E8JxXuE,W9JwXvE,E8JxXwF,kBAAY,O9JwXpG,C;UAAA,U8Jv  
XQ,kB9JuXR,E8JvX6B,I9JuX7B,E8JvXuD,kBAAY,OAAZ,GAAMB,WAAAnB,I9JuXvD,E8JvX6F,C9JuX7F,E8Jv  
X2G,I9JuX3G,C;;M8JrXI,IAAI,IAAK,OAAL,GAAY,SAAhB,C;QACI,KAAC,SAAL,IAAa,I;OAIjB,OAAO,qD;K;  
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C1D,Y;MAA0C,qB;K;IAE1C,gC;MAAA,oC;MACI,0BpHriBuC,E;MoHsiBvC,sBAAiC,U;MACjC,4BAAuC,E;K;  
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c,W;MACIB,IAAI,eAAc,UAAAd,QAA6B,CAAjC,C;QACI,cAAkB,cAAc,UAAIB,GAAGC,UAAhC,GAAMd,U;MA  
CrE,OAAO,W;K;;IAZf,4C;MAAA,2C;QAAA,0B;OAAA,oC;K;qDAgBA,qB;MAEI,WAVEGD,mBAAY,cAuenC,S  
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ACnD,UAAU,IAAV,EAAGB,cAAhB,C;K;;IA5iBJ,iD;MAAA,oD;MAGwC,+B;MAPb5C,sB;MAqBsB,Q;MACV,  
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;MAJIB,Y;K;IAOA,4C;MAAA,oD;MAG2C,+B;MATc/C,sB;MAuQC,sBxJrB8D,YwJqBhD,QxJrBgD,C;MwJsB9D  
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,I;;M8KlhqBJ,aAAa,iB9KohqBN,G8KphqBM,C;MACb,wBAAGB,SAAhB,gB;QAAgB,gBAAA,SAAhB,M;QAC  
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Q,IAAZ,EAAiB,OAAQ,MAAzB,C;;QAapB,OAVO,W;O;KAGX,C;IAUA,0B;MAQqB,IAAN,I;MADX,IAAI,oCA  
AJ,C;QACW,QAAM,cAAN,C;eACH,C;YAAK,iB;YAAL,K;eACA,C;YAAK,aAAU,8BAAJ,GAakB,sBAAK,CA  
AL,CAAlB,GAA+B,oBAAW,OAAhD,C;YAAL,K;kBACQ,0BAAM,qBAAoB,YAAy,cAAZ,CAApB,CAAN,C;Y  
AHL,K;;QAAP,W;OAMJ,OAAoC,oBAA7B,mBAAM,oBAAN,CAA6B,C;K;IAGxC,yC;MAIwB,SAApB,WAAoB  
,Y;MAApB,kB;K;IAEJ,4B;MAM6D,QAAM,gBAAN,C;aACzD,C;UADyD,OACpD,U;aACL,C;UAFyD,OAEPD,  
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Z,yC;MAIwB,OAAPB,WAAoB,Y;MAApB,kB;K;IAEJ,4B;MAM4D,OAA6B,oBAA7B,mBAAM,oBAAN,CAA6B  
,C;K;IAEzF,yC;MAIwB,SAApB,WAAoB,Y;MAApB,kB;K;IAEJ,4B;MAMqD,QAAM,cAAN,C;aACjD,C;UADiD  
,OAC5C,U;aACL,C;UAFiD,Oc/X8B,uB;gBd+X9B,OAGzC,uB;;K;IAGZ,iC;MAMmE,4BAAc,SAAd,C;K;IAEnE,  
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VgiBP,W;K;IAEJ,mC;MAOI,Q;MAAA,IAAI,SAAK,UAAT,C;QAAA,OAA0B,MAAN,KAAM,C;;QAAiC,kBAAP  
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BP,W;K;IAEJ,mC;MAOWB,kBAAPB,qBAAC,SAAd,C;MAA4B,4B;MAA5B,OAA4C,oBU3jBrC,WV2jBqC,C;K;I  
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K,WAAI,OAAJ,C;K;4FAGT,yB;MAAA,gD;MAAA,sC;QAKS,OAAL,SAAK,EAAO,QAAP,C;O;KALT,C;4FAQ

A,yB;MAAA,gD;MAAA,sC;QAKS,OAAL,SAAK,EAAO,QAAP,C;O;KALT,C;4FAQA,yB;MAAA,gD;MAAA,sC ;QAKS,OAAL,SAAK,EAAO,QAAP,C;O;KALT,C;8FAQA,8B;MAKI,SAAK,cAAO,OAAP,C;K;8FAGT,yB;MAA A,sD;MAAA,sC;QAKS,UAAL,SAAK,EAAU,QAAV,C;O;KALT,C;8FAQA,yB;MAAA,sD;MAAA,sC;QAKS,UA AL,SAAK,EAAU,QAAV,C;O;KALT,C;8FAQA,yB;MAAA,sD;MAAA,sC;QAKS,UAAL,SAAK,EAAU,QAAV,C ;O;KALT,C;IAQA,qC;MAIU,IAIe,I;MAHjB,kBADE,QACF,c;QAAiB,OAAO,yBAAO,QAAP,C;;QAEpB,aAAsB, K;QACT,0B;QAAb,OAAa,cAAb,C;UAAa,sB;UACT,IAAI,oBAAL,IAAJ,CAAJ,C;YAAe,SAAS,I;;QAC5B,OAAO ,M;;K;IAKnB,uC;MAKiB,Q;MADb,aAAsB,K;MACT,0B;MAAb,OAAa,cAAb,C;QAAa,sB;QACT,IAAI,oBAAL,I AAJ,CAAJ,C;UAAe,SAAS,I;;MAE5B,OAAO,M;K;IAGX,uC;MAII,OAAO,yBAAGB,OAAT,QAAS,CAAhB,C;K; IAGX,0C;MAIW,iBAAMb,gCAAT,QAAS,EAAgC,SAAhC,C;MAIHG,Q;MAkH7B,OAIH2D,CAA9B,sEAA8B,o BAAU,UAAV,C;K;IAqH/D,0C;MAII,UAAmB,8BAAT,QAAS,C;MACnB,O7K0EwD,C6K1EjD,G7K0EkD,U6K1 EID,IAAoB,4BAAU,GAAV,C;K;IAG/B,0C;MAII,OnLqoPO,EmLroPA,QnL6jPA,YAAQ,CAwER,CmLroPA,IAA yB,4BAAmB,8BAAT,QAAS,CAAnB,C;K;IAGpC,0C;MAIW,iBAAMb,gCAAT,QAAS,EAAgC,SAAhC,C;MA7H G,Q;MA6H7B,OA7H2D,CAA9B,sEAA8B,oBAAU,UAAV,C;K;IAGI/D,0C;MAII,InLunPO,EmLvnPH,QnL+iPG, YAAQ,CAwER,CmLvnPP,C;QACI,OAAO,4BAAmB,8BAAT,QAAS,CAAnB,C;;QAEp,OAAO,wB;K;IAGf,0C; MAII,UAAmB,8BAAT,QAAS,C;MACnB,I7K0CwD,C6K1CpD,G7K0CqD,U6K1CzD,C;QACI,OAAO,4BAAU,G AAV,C;;QAEp,OAAO,wB;K;IAGf,kC;MACI,a7KmCwD,CAAC,mB;M6KICzD,iB;MACA,OAAO,M;K;IAIX,2C; MAKkF,gCAAc,SAAd,EAAyB,IAAzB,C;K;IAEIF,2C;MAKkF,gCAAc,SAAd,EAAyB,KAAzB,C;K;IAEIF,sE;MA CI,iBAAa,KAAb,C;MIKIjgB,kBkKmJX,oB;MACD,OAAO,qBAAP,C;QACI,IAAI,UAAU,kBAAV,6BAAJ,C;UA CI,oB;UACA,WAAS,I;SAGrB,OAAO,Q;K;oFAIX,4B;MAM6D,kCAAS,KAAT,C;K;IAE7D,gC;MAKiD,IAAI,m BAAJ,C;QAAe,MAAM,2BAAuB,gBAAvB,C;;QAArB,OAAmE,2BAAS,CAAT,C;K;IAEpH,sC;MAKwD,OAAI, mBAAJ,GAAe,IAAf,GAAyB,2BAAS,CAAT,C;K;IAEjF,+B;MAKgD,IAAI,mBAAJ,C;QAAe,MAAM,2BAAuB,g BAAvB,C;;QAArB,OAAmE,2BAAS,2BAAT,C;K;IAEnH,qC;MAKuD,OAAI,mBAAJ,GAAe,IAAf,GAAyB,2BA AS,2BAAT,C;K;IAEHf,2C;MAK8E,kCAAc,SAAd,EAAyB,IAAzB,C;K;IAE9E,2C;MAK8E,kCAAc,SAAd,EAAy B,KAAzB,C;K;IAE9E,wE;MAEgB,UAGS,MAHT,EAcY,MAdZ,EAc6B,M;MAfzC,IAAI,uCAAJ,C;QACI,OAAO C,cAA5B,sEAA4B,EAAc,SAAd,EAAyB,uBAAzB,C;MAExC,iBAAsB,C;MACD,oC;MAArB,qBAAkB,CAAlB,m C;QACI,cAAc,sBAAK,SAAL,C;QACd,IAAI,UAAU,OAAV,MAAsB,uBAA1B,C;UACI,Q;QAEJ,IAAI,eAAc,SA AIB,C;UACI,sBAK,UAAL,EAAmB,OAAmB,C;QAEJ,+B;;MAEJ,IAAI,aAAa,cAAjB,C;QACwB,oC;QAAiB,mB ;QAArC,oE;UACI,2BAAS,WAAT,C;QAEJ,OAAO,I;;QAEp,OAAO,K;;K;IChS+B,wC;MAAkC,uB;MAAjC,0B;K; 4FACpB,Y;MAAQ,OAAA,eAAS,K;K;iDACxC,iB;MAAkC,mCAAS,0BAAoB,KAApB,CAAT,C;K;;IAGT,gC;M AAyC,8B;MAAxC,0B;K;oFACH,Y;MAAQ,OAAA,eAAS,K;K;yCACxC,iB;MAAkC,mCAAS,0BAAoB,KAApB, CAAT,C;K;mCAEIC,Y;MAAuB,eAAS,Q;K;8CACCh,iB;MAAuC,OAAA,eAAS,kBAAS,0BAAoB,KAApB,CAA T,C;K;yCAEHd,0B;MAA8C,OAAA,eAAS,aAAI,0BAAoB,KAApB,CAAJ,EAAgC,OAAhC,C;K;yCACvD,0B;MA CI,eAAS,aAAI,2BAAqB,KAArB,CAAJ,EAAiC,OAAjC,C;K;;IAIjB,+C;MACoB,Q;MAAA,kC;MAAhB,IAAa,CA AT,0BAAJ,C;QAAA,OAA2B,8BAAy,KAAZ,I;;QAAuB,MAAM,8BAA0B,mBAAGB,KAAhB,2BAA0C,gBAAG, 2BAAH,CAA1C,OAA1B,C;K;IAE5D,gD;MACoB,Q;MAAA,qB;MAAhB,IAAa,CAAT,0BAAJ,C;QAAA,OAA5B, iBAAO,KAAP,I;;QAAkB,MAAM,8BAA0B,oBAAiB,KAAjB,2BAA2C,gBAAG,cAAH,CAA3C,OAA1B,C;K;IAG ID,+B;MAK+C,gCAAqB,SAArB,C;K;IAE/C,iC;MAM6D,wBAAa,SAAb,C;K;;;IvKpC7D,oD;MAQuF,wC;K;IAR vF,8CASI,Y;MAAuC,8B;K;IAT3C,gF;IwKY8G,wC;MAAA,mB;QAAE,kBAAS,aAAT,C;O;K;IATh,yB;MASqG ,oCAAS,sBAAT,C;K;8FAErG,yB;MAAA,kD;MxKdA,kC;MAAA,0C;MAAA,kD;QAQuF,wC;O;MARvF,4CASI, Y;QAAuC,8B;O;MAT3C,8E;MwKiB2I,qD;QAAA,mB;UAAE,gBAAS,qBAAT,C;S;O;MAH7I,gC;QAGkI,kCAAS ,mCAAT,C;O;KAHII,C;IAKA,2B;MAQI,eAAe,6B;MACf,oBAA0B,+BAAN,KAAM,EAAwC,QAAxC,EAA+D,Q AA/D,C;MAC1B,OAAO,Q;K;8FAGX,yB;MAAA,kD;MAAA,gC;QAGkI,gBAAS,aAAT,C;O;KAHII,C;IAGB0C,y B;K;+CAoBtC,kC;MAOI,IAAI,uCAA0B,QAAS,UAAvC,C;QAAkD,M;MACID,OAAO,sBAAS,QAAS,WAAIB,e; K;+CAGX,kC;MAQqD,6BAAS,QAAS,WAAIB,e;K;;;IAezD,mC;MAA2C,wB;MACvC,eAAoB,C;MACpB,mB AA4B,I;MAC5B,sBAAyC,I;MACzC,gBAAoC,I;K;gDAEpC,Y;MACI,OAAO,IAAP,C;QACI,QAAM,YAAN,C;eA CI,C;YAAA,K;eACA,C;YACI,IAAI,kCAAe,UAAmB,C;cACI,eAAQ,C;cACR,OAAO,I;;cAEP,sBAAE,I;;YALvB, K;eAOA,C;YAAc,OAAO,K;eACrB,C;eAAA,C;YAAgC,OAAO,I;kBAC/B,MAAM,yB;;QAGIB,eAAQ,C;QACR, WAAW,4B;QACX,gBAAW,I;QACX,IxH/FR,oBDgDQ,WyH+CY,kBzH/CZ,CChDR,C;;K;6CwHmGA,Y;MACU,

IASe,I;MATrB,QAAM,YAAN,C;aACI,C;aAAA,C;UAAcC,OAAO,qB;aAC7C,C;UACI,eAAQ,C;UACR,OAAO,k  
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DAItB,Y;MACI,IAAI,CAAC,cAAL,C;QAAgB,MAAM,6B;;QAA8B,OAAO,W;K;2DAG/D,Y;MAA4C,QAAM,Y  
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CA,yB;O;K;yDANR,kC;MACI,IAAI,CAAC,QAAS,UAA d,C;QAAYB,M;MACzB,sBA Ae,Q;MACf,eAAQ,C;MAC  
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HoBH,eAAQ,C;K;kGAIR,Y;MAAQ,0C;K;;IxK1LhB,oD;MAQuF,wC;K;IARvF,8CASI,Y;MAAuC,8B;K;IAT3C,g  
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AS,E;K;IAEzE,8B;MAK6D,OAAI,Qb2rPtD,YAAQ,Ca3rP0C,GAAwB,eAAxB,GAAsD,WAAT,QAAS,C;K;IAEn  
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A,W;;;;;K;IADwF,gE;MAAA,yD;uBAAA,uG;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IAP5F,4C;MAOmF,g  
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b,OAAa,cAAb,C;QAAa,sB;QACT,KAAM,WAAL,IAAK,MAAT,C;QACN,KAAM,WAAL,IAAK,OAAT,C;;MAE  
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B;QAAA,WAAGC,I;MADhC,0B;MACA,0B;MACA,4B;K;IAGuC,0E;MAAA,oD;MACnC,gBA Ae,iCAAS,W;MA  
CxB,iBAAqB,E;MACrB,gBAAmB,I;K;oEAEnB,Y;MACI,OAAO,aAAS,UAAhB,C;QACI,WAAW,aAAS,O;QAC  
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B;MACV,aAAa,a;MACb,gBAAW,I;MACX,iBAAY,E;MAEZ,OAAO,yE;K;iEAGX,Y;MACI,IAAI,mBAAa,EAAj  
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AAY,0B;K;IAC6C,wE;MACjD,gBA Ae,gCAAS,W;MACxB,aAAY,C;K;6DACZ,Y;MAC2C,Q;MAAvC,OAAO,iB  
AAa,oBAAmB,iBAAnB,EAAMB,yBAAnB,QAAb,EAA0C,aAAS,OAA nD,C;K;gEAGX,Y;MACI,OAAO,aAAS,U  
;K;;0CARxB,Y;MAAQD,wD;K;;IAmBzD,0D;MACI,4B;MACA,4B;MACA,4B;K;IAEuC,sE;MAAA,gD;MACnC,i  
BAAgB,gCAAU,W;MAC1B,iBAAgB,gCAAU,W;K;4DAC1B,Y;MACI,OAAO,sCAAU,cAAU,OAAPB,EAA4B,c  
AAU,OAAtC,C;K;+DAGX,Y;MACI,OAAO,cAAU,UAAV,IAAuB,cAAU,U;K;;yCARhD,Y;MAAuC,uD;K;;Iac3  
C,6D;MACI,0B;MACA,gC;MACA,0B;K;IAEuC,4E;MAAA,sD;MACnC,gBA Ae,kCAAS,W;MACxB,oBAAiC,I;K  
;+DAEjC,Y;MACI,IAAI,CAAC,2BAAL,C;QACI,MAAM,6B;MACV,OAAO,gCA Ae,O;K;kEAG1B,Y;MACI,OA  
AO,2B;K;+EAGX,Y;MACQ,Q;MAAJ,IAAI,iEAA2B,KAA/B,C;QACI,oBAAe,I;MAEnB,OAAO,yBAAP,C;QACI

,IAAI,CAAC,aAAS,UAAAd,C;UACI,OAAO,K;;UAEP,cAAc,aAAS,O;UACvB,uBAAuB,wCAAS,2CAAY,OAAZ,CAAT,C;UACvB,IAAI,gBAAiB,UAArB,C;YACI,oBAAe,gB;YACf,OAAO,I;;MAInB,OAAO,I;K;;4CA9Bf,Y;MAAuC,0D;K;;IAoC9B,6I;MAAA,wC;MAAA,6B;MAAA,yB;MAAA,4C;MAAA,kD;MAAA,gD;MAAA,wB;MAAA,yB;MAAA,kC;K;;;yDAAA,Y;;;kBAgyC,I;iCAFIC,C;cACI,sD;cAAhB,gB;;;cAAA,KAAgB,yBAAhB,C;gBAA,AA,gB;;;cAAgB,oC;cACZ,aAAa,6BAAU,oBAAmB,uBAAmB,EAAMb,+BAAmB,QAAV,EAAuC,OAAvC,C;cACb,gB;8BAAA,sCAAS,4BAAS,MAAT,CAAT,O;kBAAA,2C;uBAAA,yB;cAAA,Q;;cAFJ,gB;;;cAIJ,W;;;K;IANS,0F;MAAA,yD;uBAAA,il;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IADb,wD;MACI,gBAAS,kDAAT,C;K;;;IAoByB,qD;MACzB,0B;MACA,8B;MACA,0B;MC3TA,IAAI,ED+TQ,qBAAc,CC/TtB,CAAJ,C;QACI,cD8T2B,+CAA4C,iB;QC7TvE,MAAM,gCAAYB,OAAQ,WAAjC,C;OAFV,IAAI,EDgUQ,mBAAy,CChUpB,CAAJ,C;QACI,gBD+TyB,6CAA0C,e;QC9TnE,MAAM,gCAAYB,SAAQ,WAAjC,C;OAFV,IAAI,EDIUQ,mBAAy,iBCjUpB,CAAJ,C;QACI,gBDgUkC,0DAAuD,eAAvD,WAAmE,iB;QC/TrG,MAAM,gCAAYB,SAAQ,WAAjC,C;Q;SFDkUa,Y;MAAQ,yBAAW,iBAAx,I;K;yCAE/B,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,eAAhB,GAAqC,gBAAy,eAAZ,EAAsB,oBAAa,CAAb,IAAtB,EAAsC,eAAtC,C;K;yCAC9E,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,IAAhB,GAA0B,gBAAy,eAAZ,EAAsB,iBAAtB,EAakC,oBAAa,CAAb,IAAI,C,C;K;IAEzC,8D;MAAA,wC;MAEtB,gBAAe,2BAAS,W;MACxB,gBAAe,C;K;0DAEf,Y;MAEI,OAAO,gBAAW,kCAAX,IAAYB,aAAS,UAAzC,C;QACI,aAAS,O;QACT,qC;;K;2DAIR,Y;MACI,a;MACA,OAAQ,gBAAW,gCAAZ,IAAYB,aAAS,U;K;wDAG7C,Y;MACI,a;MACA,IAAI,iBAAy,gCAAhB,C;QACI,MAAM,6B;MACV,qC;MACA,OAAO,aAAS,O;K;;qCAvBxB,Y;MAA0B,mD;K;;IAgCA,uC;MAC1B,0B;MACA,oB;MC3WA,IAAI,ED+WQ,gBAAS,CC/WjB,CAAJ,C;QACI,cD8WsB,yCAAsC,YAAtC,M;QC7WtB,MAAM,gCAAYB,OAAQ,WAAjC,C;Q;0CDgXV,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,eAAhB,GAAqC,gBAAy,eAAZ,EAAsB,CAAtB,EAAYB,YAAzB,C;K;0CAC9E,a;MAAYC,OAAI,KAAK,YAAT,GAAgB,IAAhB,GAA0B,iBAAa,eAAb,EAAuB,CAAvB,C;K;IAE5B,gE;MACnC,YAAW,yB;MACX,gBAAe,4BAAS,W;K;yDAExB,Y;MACI,IAAI,cAAQ,CAAZ,C;QACI,MAAM,6B;MACV,6B;MACA,OAAO,aAAS,O;K;4DAGpB,Y;MACI,OAAO,YAAO,CAAP,IAAY,aAAS,U;K;;sCAZpC,Y;MAAuC,oD;K;;IAsB3C,gD;MACI,0B;MACA,4B;K;IAEuC,0E;MAAA,oD;MACnC,gBAAe,iCAAS,W;MACxB,iBAAqB,E;MACrB,gBAAmB,I;K;oEAEnB,Y;MACI,IAAI,aAAS,UAAb,C;QACI,WAAW,aAAS,O;QACpB,IAAI,wCAAU,IAAV,CAAJ,C;UACI,iBAAy,C;UACZ,gBAAW,I;UACX,M;UAGR,iBAAy,C;K;8DAGhB,Y;MAMiB,Q;MALb,IAAI,mBAAa,EAAjB,C;QACI,iB;MACJ,IAAI,mBAAa,CAAjB,C;QACI,MAAM,6B;MACV,aCa,gF;MAGb,gBAAW,I;MACX,iBAAy,E;MACZ,OAAO,M;K;iEAGX,Y;MACI,IAAI,mBAAa,EAAjB,C;QACI,iB;MACJ,OAAO,mBAAa,C;K;;2CAIC5B,Y;MAAuC,yD;K;;IA2Cb,uC;MAC1B,0B;MACA,oB;MC5bA,IAAI,ED+bQ,gBAAS,CC/bjB,CAAJ,C;QACI,cD8bsB,yCAAsC,YAAtC,M;QC7btB,MAAM,gCAAYB,OAAQ,WAAjC,C;Q;0CDgcV,a;MItXO,SJsXmC,eAAQ,CAAR,I;MAAD,OAA4B,KAAK,CAAT,GAAY,yBAAZ,GAAuC,iBAAa,eAAb,EAAuB,EAAvB,C;K;0CACxG,a;MIvXO,SJuXmC,eAAQ,CAAR,I;MAAD,OAA4B,KAAK,CAAT,GAAY,yBAAZ,GAAuC,gBAAy,eAAZ,EAAsB,YAAtB,EAA6B,EAA7B,C;K;IAEjE,gE;MACnC,gBAAe,4BAAS,W;MACxB,YAAW,yB;K;2DAEX,Y;MAEI,OAAO,YAAO,CAAP,IAAY,aAAS,UAA5B,C;QACI,aAAS,O;QACT,6B;;K;yDAIR,Y;MACI,a;MACA,OAAO,aAAS,O;K;4DAGpB,Y;MACI,a;MACA,OAAO,aAAS,U;K;;sCAnBxB,Y;MAAuC,oD;K;;IA6B3C,gD;MACI,0B;MACA,4B;K;IAGuC,0E;MAAA,oD;MACnC,gBAAe,iCAAS,W;MACxB,iBAAqB,E;MACrB,gBAAmB,I;K;gEAEnB,Y;MACI,OAAO,aAAS,UAAhB,C;QACI,WAAW,aAAS,O;QACpB,IAAI,CAAC,wCAAU,IAAV,CAAL,C;UACI,gBAAW,I;UACX,iBAAy,C;UACZ,M;;MAGR,iBAAy,C;K;8DAGhB,Y;MAMqB,Q;MALjB,IAAI,mBAAa,EAAjB,C;QACI,a;MAEJ,IAAI,mBAAa,CAAjB,C;QACI,aCa,gF;QACb,gBAAW,I;QACX,iBAAy,C;QACZ,OAAO,M;OAEX,OAAO,aAAS,O;K;iEAGpB,Y;MACI,IAAI,mBAAa,EAAjB,C;QACI,a;MACJ,OAAO,mBAAa,CAAb,IAAkB,aAAS,U;K;;2CAIC1C,Y;MAAuC,yD;K;;IAuCN,+C;MAAC,sB;MAAiC,gC;K;0CACnE,Y;MAAuC,4BAAiB,aAAO,WAAxB,EAAoC,kBAApC,C;K;;IAGP,+C;MAAuE,2B;MAAtE,sB;MAAiC,gC;MACIE,kBAAuB,c;K;6CAEvB,Y;MACI,OAAO,aAAO,UAAAd,C;QACI,WAAW,aAAO,O;QACIB,UAAU,mBAAy,IAAZ,C;QAEV,IAAI,eAAS,WAAI,GAAJ,CAAb,C;UACI,mBAAQ,IAAR,C;UACA,M;;MAIR,W;K;;IAKgC,0D;MAAC,wC;MAAuC,kC;K;IACrC,0E;MAAA,oD;MACnC,gBAAmB,I;MACnB,iBAAqB,E;K;oEAErB,Y;MACI,gBAAe,mBAAa,EAAjB,GAAqB,+CAArB,GAA4C,2CAAa,4BAAb,C;MACvD,iBAAgB,qBAAJ,GAAsB,CAAtB,GAA6B,C;K;8DAG7C,Y;MAMiB,Q;MALb,IAAI,iBAAy,CAAhB,C;QACI,iB;MAEJ,IAAI,mBAAa,CAAjB,C;QACI,MAAM,6B;MACV,aAAa,8D;MAEb,iBAAy,E;MACZ,OAAO,M;K;iEAGX,Y;MACI,IAAI,iBAAy,CAAhB,C;QACI,iB;MACJ,OAAO,mBAAa,C;K;;2CAxB5B,Y;MAAuC

,yD;K;;IA6B3C,kC;MAWI,OAAW,iDAAJ,GAAwC,SAAxC,GAakD,4BAAwB,SAAxB,C;K;IAeIB,uD;MAAA,q  
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C,kC;K;uCAE7C,Y;MAAiC,6B;K;;;IAdrC,gC;MAAA,+B;QAAA,c;OAAA,wB;K;IAkBA,oB;MAIoC,6B;K;IAEp  
C,2B;MAMmD,OAAI,QAAS,OAAT,GAAGB,CAAPB,GAAGC,MAAT,QAAS,CAAhC,GAA6C,U;K;iFAEHg,yB;  
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A,oCAAGB,6EAAhB,C;K;IAKyB,yL;MAAA,wC;MAAA,6B;MAAA,yB;MAAA,wC;MAAA,wC;MAAA,gD;MA  
AA,sD;MAAA,4D;MAAA,wB;MAAA,0B;MAAA,uB;MAAA,0B;MAAA,wB;MAAA,qB;MAAA,4B;MAAA,kC;  
K;;;2DAAA,Y;;;cACrB,4BAAiC,eAAL,uBAAK,EAAa,IAAb,C;+BACvB,0BAAO,uBAAP,I;cACV,IAAI,kBAA  
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L/L5C,iBhL+L6C,UgL/LjD,C;gBACI,IAAI,qCAAKB,iBAAO,KAAP,KAAe,uBAARc,C;kBAA2C,iB;kCAAA,iCA  
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CJ,W;;;K;IARCyB,sI;MAAA,yD;uBAAA,6K;YAAA,S;iBAAA,Q;;iBAAA,uB;O;K;IAF7B,6E;MACI,IAAI,  
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D,uB;MAApD,sB;MxKrDxB,IAAI,EwKuDQ,cAAc,CxKvDtB,CAAJ,C;QACI,cwKsD2B,wE;QxKrD3B,MAAM,g  
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,aAAO,O;QxKtD3H,MAAM,gCAAyB,SAAQ,WAAjC,C;OwK2DV,kBAAuB,aAAO,O;MAC9B,oBAA8B,C;MAE

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C,iB;MAGIE,UAQ1C,MAR0C,EAe1C,MAf0C,EAqBtD,M;MATBP,aACQ,KAAM,OAAO,GAAa,IAAK,KAAtB,G  
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B;QAEH,UAAM,CAAN,C;UADJ,OACe,C;aACX,c;UAFJ,OAEiB,E;aACb,c;UAHJ,OAGiB,C;;UAHjB,OAIY,kB  
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,SAE3D,wC;QAFqD,OAEe,4F;WACvD,WAH2D,SAG3D,wC;QAHqD,OAGE,gG;;QAHF,OAI7C,uBAAmB,SAA  
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D,Y;MACgC,sB;K;;IAGpC,kC;MAAA,sC;K;+CACI,gB;MAAoE,OAAE,iBAAF,CAAE,EAAU,CAAV,C;K;gDAC  
tE,Y;MAC8C,2C;K;;IAHID,8C;MAAA,6C;QAAA,4B;OAAA,sC;K;IAMA,kC;MAAA,sC;K;+CACI,gB;MAAoE,  
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,2C;aAjB/D,kG;K;;IAoBJ,uC;MAAA,e;MAAA,iB;MAAA,uB;K;IAAA,qC;MAAA,wC;O;MASI,4E;MAMA,8E;M  
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,C;;M6HzIA,yC;;IAAA,uC;MAAA,2C;K;;;IAAA,mD;MAAA,kD;QAAA,iC;OAAA,2C;K;+EAKBA,wB;K;oDAaA  
,e;MAK2C,IAAI,IAAJ,EAGK,M;MAL5C,IAAI,+CAAJ,C;QAEI,OAAW,GAAl,kBAAS,IAAK,IAAd,CAAR,GAA  
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ArC,GAAoD,I;K;yDAI/D,e;MAGI,IAAI,+CAAJ,C;QACI,OAAW,GAAl,kBAAS,IAAK,IAAd,CAAJ,IAA0B,GAA  
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,GAAgE,I;K;;;ICtChD,oD;MACf,cAAc,GAAl,kBAAS,OAAQ,IAAjB,C;MACIB,IAAI,YAAY,mCAAhB,C;QAD  
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K;8CAdxB,mB;MAKI,OAAI,YAAY,mCAAhB,GAAuC,IAAvC,GACI,OAAQ,cAAK,IAAL,EAAW,4BAAX,C;K;  
;;;;qDAiCZ,e;MAEyB,Q;MADrB,OACI,OAAA,IAAK,IAAL,EAAy,GAAZ,CAAJ,GAAqB,0EAArB,GAAoC,I;K;  
sDAExC,8B;MACI,iBAAU,OAAV,EAAmB,IAAnB,C;K;0DAEJ,e;MACI,OAAI,OAAA,IAAK,IAAL,EAAy,GAA  
Z,CAAJ,GAAqB,mCAArB,GAAgD,I;K;;IC1DP,8C;MAAC,wB;K;kFAAA,Y;MAAA,yB;K;;IAiCe,wD;MAEjE,k  
C;MAEA,4BAAqC,mDAAJ,GAAkD,OAAQ,qBAA1D,GAA0E,O;K;4DAE3G,mB;MAA6C,+BAAS,OAAT,C;K;6  
DAC7C,e;MAA8C,eAAQ,IAAR,IAAgB,8BAAE,G;K;;IAGjF,+C;MAW2C,IAAI,IAAJ,EAGV,M;MAL7B,IAAI,+  
CAAJ,C;QAEI,OAAW,GAAl,kBAAS,SAAK,IAAd,CAAR,GAA4B,cAAI,OAAJ,GAAL,iBAAQ,SAAR,CAAJ,yC  
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AAI,+CAAJ,C;QACI,OAAW,GAAl,kBAAS,SAAK,IAAd,CAAJ,IAA0B,GAAL,iBAAQ,SAAR,CAAJ,QAA9B,GA  
AyD,mCAAzD,GAAoF,S;OAE/F,OAAW,SAAK,IAAL,KAAa,GAAjB,GAAsB,mCAAtB,GAAiD,S;K;IAG5D,iC;

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K;ImMnWvC,sC;MAWI,IAAA,KAAM,UAAN,C;QAAMB,MAAM,gCAAYB,uCAAoC,KAA7D,C;QACzB,InMG  
kE,YmMHIE,KAAM,KnMG6E,KAAjB,EmMHRD,4BAAK,UnMG6E,KAA7B,CmMHIE,K;UAFiD,OAEIB,sBAA  
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HiD,OnMuBI,SmMpBrB,sBnMiCsB,SmMjCb,KAAM,MnMiCiB,KAAK,GAAY,CmMjC1B,WnMiC0B,MAAZ,IA  
Af,CmMjCtB,EAA2B,KAAM,KAAjC,CnMoB+B,KAAK,GAAW,CmMpBN,WnMoBM,MAAX,IAAf,C;YmMvB  
J,OAIzC,mB;K;IAGZ,8B;MAOuC,OnL0VG,Uml1VH,oBnL0VG,C;K;ImLxV1C,uC;MASmD,8BAAU,2BAAV,  
EAAe,KAAf,C;K;IAEnD,6C;MAUI,sBAAsB,IAAtB,EAA4B,KAA5B,C;MAEA,iBAAiB,InLwNkB,KmLxNIB,8B;  
MACjB,kBAakB,KnLuNiB,KmLvNjB,8B;MAEIB,mBAAmB,2BAAS,UAAT,EAAqB,WAARb,+B;MACnB,OnL  
6TsC,Uml7T/B,YnL6T+B,C;K;ImL1T1C,uC;MAWI,IAAA,KAAM,UAAN,C;QAAMB,MAAM,gCAAYB,uCAAo  
C,KAA7D,C;QACzB,InL7CmE,amL6CnE,KAAM,KnL7C+E,KAAIB,EmL6CtD,6BAAM,UnL7C8E,KAA9B,Cm  
L6CnE,K;UAFoD,OAEpB,uBAAU,KAAM,MAAhB,EnLhCuB,UmlgCA,KAAM,KnLhCK,KAAK,KAAW,ChBs  
Q7C,UAAW,oBAAL,CmMtOyB,WnMsOzB,MAAK,CAAL,iBAAN,CgBtQ6C,MAAX,CAAhB,CmLgCvB,C;UA  
ChC,InL9CmE,amL8CnE,KAAM,MnL9C+E,KAAIB,EmL8CrD,6BAAM,UnL9C6E,KAA9B,CmL8CnE,K;YAHo  
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O,K;K;IAIX,2C;MxLrHI,IAAI,EX2B8D,YmM0FD,KnM1FkB,KAAjB,EmM0FO,InM1FsB,KAA7B,CmM0FD,Ix  
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,EKmC+D,amLmFC,KnLnFiB,KAAIB,EmLmFS,InLnFqB,KAA9B,CmLmFC,IxLrHhE,CAAJ,C;QACI,cwLqHgF,  
+B;QxLpHhF,MAAM,gCAAYB,OAAQ,WAAjC,C;Q;IyLpBc,6C;MAScxB,oC;MA/BA,iB;MANA,Y;MACA,Y;M  
ACA,Y;MACA,Y;MACA,Y;MACA,sB;MzLYA,IAAI,EyLLQ,CAAC,WAAK,QAAL,GAAU,QAAV,GAAe,QAAf  
,GAAoB,QAARb,MAA2B,CzLKnC,CAAJ,C;QACI,cyLNwC,wD;QzLOxC,MAAM,gCAAYB,OAAQ,WAAjC,C;O  
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O,C;MACIB,WAAI,Q;MACJ,WAAI,Q;MACJ,WAAI,Q;MACJ,SAAS,Q;MACT,WAAI,E;MACJ,IAAK,IAAO,KA  
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ArC,I;K;yCAGIC,Y;MAAkC,OAAE,UAAF,qBAAU,iB;K;;IAGhD,kC;MAM6E,2BAAgB,SAAhB,EAAsB,IAAtB,  
C;K;;;0DAYzE,iB;MAA2C,qCAAiB,UAAjB,EAAwB,KAAxB,KAAC,8BAAiB,KAAjB,EAAwB,iBAAXB,C;K;i  
DAC7E,Y;MAAkC,QAAC,8BAAiB,UAAjB,EAAwB,iBAAXB,C;K;;IAcR,gD;MAI3B,gBAAqB,K;MACrB,uBAA  
4B,Y;K;0FACD,Y;MAAQ,oB;K;iGACD,Y;MAAQ,2B;K;2DAE1C,gB;MAA+D,YAAK,C;K;mDAEPe,iB;MAAg  
D,gBAAS,aAAT,IAAmB,SAAS,oB;K;0CAC5E,Y;MAAkC,SAAE,iBAAU,oBAAZ,C;K;yCAEIC,iB;MACI,OAA  
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B,C;K;IAQvD,+C;MAI1B,gBAAqB,K;MACrB,uBAA4B,Y;K;yFACF,Y;MAAQ,oB;K;gGACD,Y;MAAQ,2B;K;0  
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;;;;;ICvBhB,yC;MA2B9B,uC;MA1BA,wB;MAIA,gB;M5LQA,IAAI,E4LDS,iBAAy,IAAb,MAAuB,iBAAvB,C5L  
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A/B,C;K;;IARCR,iD;MAAA,gD;QAAA,+B;OAAA,yC;K;;2CArCJ,Y;MAWI,oB;K;2CAXJ,Y;MAeI,gB;K;6CAfJ,0  
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D;MAKA,8C;MAKA,gD;K;;IAVA,2C;MAAA,sB;MAAA,mC;K;;IAKA,oC;MAAA,sB;MAAA,4B;K;;IAKA,qC;  
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,Q;MAAb,wBAAa,KAAb,gB;QAAa,WAAA,KAAb,M;QACI,yBAAO,IAAP,C;;MACJ,OAAO,S;K;mFAGX,qB;M  
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B,C;UAAwB,WAAy,WAAI,OAAJ,C;;M0L9wBrD,kB1L+wBE,W;MAMrBA,oBAAM,iBAAa,qCAAwB,EAAXB,  
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6B,kBAAa,KAAM,UAAAnB,KACrB,2CAAS,KAAM,MAAf,cAAwB,6CAAQ,KAAM,KAAd,QAAxB,KAA8C,cA  
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gB,UAAF,qBAAU,SAAV,cAAqB,SAAnC,GAAgD,UAAF,2BAAgB,SAAhB,eAA4B,CAAC,SAAD,IAA5B,C;K;I  
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C,cAAuB,cAAJ,GAAa,KAAb,GAAwB,mB;K;gDAE3C,Y;MAAkC,qB;K;iDAEIC,Y;MACI,YAAY,W;MACZ,IA  
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Y;MAA4B,uB;K;;IAMhC,0B;K;oCAII,Y;MAA4B,wB;K;;IAMhC,wB;K;kCAII,Y;MAA4B,sB;K;;IAMhC,yB;K;m  
CAII,Y;MAA4B,uB;K;;I7M5BP,qB;MAErB,6B;MAFwD,gB;K;IAExD,2B;MAAA,+B;MACI,iBAGoC,a;MAEpC,  
iBAGoC,c;MAEpC,kBAGmC,C;MAEnC,iBAGkC,E;K;;IANtC,uC;MAAA,sC;QAAA,qB;OAAA,+B;K;sGAsBA  
,yB;MjBqRA,WAS6D,wB;MAT7D,+B;MiB7PA,gD;MAxBa,wB;QAM0D,OAYBS,aAAa,IAAK,KAAIB,EAA8B,  
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B,KhB4R7B,KAAK,CAAL,iBAAN,CgBnR4D,MAA9B,C;O;KafnE,C;kGAQA,yB;MAAA,gD;MAAA,wB;QAO  
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;MiBpPA,wB;QAEuD,OASA,eAAM,IAAK,KAAK,KAAW,CjBkP7C,eAAW,oBiB3PiB,KjB2PtB,KAAK,CAAL,UAAN,CiBIP6C,MAAX,CAAhB,C;O;KAXvD,C;4FAGA,yB;MfkPA,aAS6D,0B;MAT7D,+B;MelPA,wB;QAEwD,OAMD,eAAM,IAAK,KAAK,KAAW,CfmP7C,eAAW,oBezPkB,KfyPvB,KAAK,CAAL,YAAN,CenP6C,MAAX,CAAhB,C;O;KARvD,C;4FAGA,yB;MhBkQA,kBAS6D,sB;MAT7D,+B;MgBlQA,wB;QAEsD,OAGC,eAAM,IAAK,KAAK,KAAW,ChBsQ7C,eAAW,oBgBzQgB,KhByQrB,KAAK,CAAL,iBAAN,CgBtQ6C,MAAX,CAAhB,C;O;KALvD,C;4FAGA,yB;MAAA,+B;MAAA,wB;QAEuD,sBAAM,IAAK,KAAK,KAAK,KAAW,KAAX,CAAhB,C;O;KAFvD,C;8FAIA,yB;MjBuOA,WAS6D,wB;MAT7D,+B;MiBvOA,wB;QAEwD,OASA,eAAM,IAAK,KAAK,UAAAY,CjBqO/C,eAAW,oBiB9OmB,KjB8OxB,KAAK,CAAL,UAAN,CiBrO+C,MAAZ,CAAhB,C;O;KAXxD,C;8FAGA,yB;MfqOA,aAS6D,0B;MAT7D,+B;MerOA,wB;QAEyD,OAMD,eAAM,IAAK,KAAK,UAAAY,CfsO/C,eAAW,oBe5OoB,Kf4OzB,KAAK,CAAL,YAAN,CetO+C,MAAZ,CAAhB,C;O;KARxD,C;8FAGA,yB;MhBqPA,kBAS6D,sB;MAT7D,+B;MgBrPA,wB;QAEuD,OAGC,eAAM,IAAK,KAAK,UAAAY,ChByP/C,eAAW,oBgB5PkB,KhB4PvB,KAAK,CAAL,iBAAN,CgBzP+C,MAAZ,CAAhB,C;O;KALxD,C;8FAGA,yB;MAAA,+B;MAAA,wB;QAEwD,sBAAM,IAAK,KAAK,UAAAM,KAAZ,CAAhB,C;O;KAFxD,C;8FAIA,yB;MjB0NA,WAS6D,wB;MAT7D,+B;MiB1NA,wB;QAEwD,OASA,eAAM,IAAK,KAAK,UAAAY,CjBwN/C,eAAW,oBiBjOmB,KjBiOxB,KAAK,CAAL,UAAN,CiBxN+C,MAAZ,CAAhB,C;O;KAXxD,C;8FAGA,yB;MfwNA,aAS6D,0B;MAT7D,+B;MexNA,wB;QAEyD,OAMD,eAAM,IAAK,KAAK,UAAAY,CfyN/C,eAAW,oBe/NoB,Kf+NzB,KAAK,CAAL,YAAN,CezN+C,MAAZ,CAAhB,C;O;KARxD,C;8FAGA,yB;MhBwOA,kBAS6D,sB;MAT7D,+B;MgBxOA,wB;QAEuD,OAGC,eAAM,IAAK,KAAK,UAAAY,ChB4O/C,eAAW,oBgB/OkB,KhB+OvB,KAAK,CAAL,iBAAN,CgB5O+C,MAAZ,CAAhB,C;O;KALxD,C;8FAGA,yB;MAAA,+B;MAAA,wB;QAEwD,sBAAM,IAAK,KAAK,UAAAM,KAAZ,CAAhB,C;O;KAFxD,C;0FAIA,yB;MjB6MA,WAS6D,wB;MAT7D,+B;MiBpMA,8C;MATA,wB;QAEsD,OASA,YAAAY,IAAZ,EjB2MjB,eAAW,oBiBpNe,KjBoNpB,KAAK,CAAL,UAAN,CiB3MiB,C;O;KAXtD,C;0FAGA,yB;Mf2MA,aAS6D,0B;MAT7D,+B;MerMA,8C;MANA,wB;QAEuD,OAMD,YAAAY,IAAZ,Ef4MjB,eAAW,oBelNgB,KfkNrB,KAAK,CAAL,YAAN,Ce5MiB,C;O;KARtD,C;0FAGA,yB;MhB2NA,kBAS6D,sB;MAT7D,+B;MgBxNA,8C;MAHA,wB;QAEqD,OAGC,YAAAY,IAAZ,EhB+NjB,eAAW,oBgBlOc,KhBkOnB,KAAK,CAAL,iBAAN,CgB/NiB,C;O;KALtD,C;0FAGA,yB;MAAA,8C;MAAA,wB;QAEsD,mBAAY,IAAZ,EAakB,KAAIB,C;O;KAFtD,C;0FAIA,yB;MjBgmA,WAS6D,wB;MAT7D,+B;MiB3KA,oD;MarBA,wB;QAMsD,OAqBA,eAAe,IAAf,EjB8KjB,eAAW,oBiBnMe,KjBmMpB,KAAK,CAAL,UAAN,CiB9KiB,C;O;KA3BtD,C;0FAOA,yB;Mf0LA,aAS6D,0B;MAT7D,+B;Me5KA,oD;MAdA,wB;QAMuD,OAcd,eAAe,IAAf,Ef+KjB,eAAW,oBe7LgB,Kf6LrB,KAAK,CAAL,YAAN,Ce/KiB,C;O;KApBtD,C;0FAOA,yB;MhBsMA,kBAS6D,sB;MAT7D,+B;MgB/LA,oD;MAPA,wB;QAMqD,OAOC,eAAe,IAAf,EhBkmjB,eAAW,oBgBzMc,KhByMnB,KAAK,CAAL,iBAAN,CgBIMiB,C;O;KAbtD,C;0FAOA,yB;MAAA,oD;MAAA,wB;QAMsD,sBA Ae,IAAf,EAAqB,KAArB,C;O;KANtD,C;oGAQA,yB;MjBmKA,WAS6D,wB;MAT7D,+B;MiBpMA,8C;MAiCA,wB;QAMkD,OArcI,YAAAY,IAAZ,EjB2MjB,eAAW,oBiBtKgB,KjBsKrB,KAAK,CAAL,UAAN,CiB3MiB,C;O;KA+BtD,C;oGAOA,yB;Mf6JA,aAS6D,0B;MAT7D,+B;MerMA,8C;MAwCA,wB;QAMmD,OA5CG,YAAAY,IAAZ,Ef4MjB,eAAW,oBehKiB,KfgKtB,KAAK,CAAL,YAAN,Ce5MiB,C;O;KAsCtD,C;oGAOA,yB;MhByKA,kBAS6D,sB;MAT7D,+B;MgBxNA,8C;MA+CA,wB;QAMiD,OAnDK,YAAAY,IAAZ,EhB+NjB,eAAW,oBgB5Ke,KhB4KpB,KAAK,CAAL,iBAAN,CgB/NiB,C;O;KA6CtD,C;oGAOA,yB;MatDA,8C;MAsDA,wB;QAMkD,OA1DI,YAAAY,IAAZ,EA0DA,KA1DA,C;O;KAoDtD,C;0FAQA,yB;MjBsIA,WAS6D,wB;MAT7D,+B;MiB3KA,oD;MjB4OJ,0B;MAAA,+B;MiBvMI,wB;QAQ6C,OjB0MP,eAAW,OiBjPK,eAAe,IAAf,EjB8KjB,eAAW,oBiBvIM,KjBuIX,KAAK,CAAL,UAAN,CiB9KiB,CA4KjB,KjBqEY,SAAX,C;O;KiBINtC,C;0FASA,yB;Mf8HA,aAS6D,0B;MAT7D,+B;Me5KA,oD;Mf6OJ,4B;MAAA,iC;Me/LI,wB;QAQ+C,OfkMP,gBAAY,QelPE,eAAe,IAAf,Ef+KjB,eAAW,oBe/HQ,Kf+Hb,KAAK,CAAL,YAAN,Ce/KiB,CAsLf,Kf4Da,SAAZ,C;O;Ke1MxC,C;0FASA,yB;MhBwIA,kBAS6D,sB;MAT7D,+B;MgB/LA,oD;MhBkQJ,6B;MgB3MI,wB;QAQ2C,OhB8MP,cgBvQkB,eAAe,IAAf,EhBkmjB,eAAW,oBgBzII,KhByIT,KAAK,CAAL,iBAAN,CgBIMiB,CAGMnB,KhBuEW,QAAY,C;O;KgBtNpC,C;0FASA,yB;MAhEA,oD;MAGEA,wB;QAQ6C,OAIES,eAAe,IAAf,EAkEL,KAIEK,C;O;KA0DtD,C;0EAUA,yB;MAAA,+B;MAAA,mB;QAM0C,sBAAM,SAAK,MAAX,C;O;KAN1C,C;0EAQA,yB;MAAA,+B;MAAA,mB;QAM0C,sBAAM,SAAK,MAAX,C;O;KAN1C,C;kGAQA,yB;MAAA,gD;MAAA,wB;QAE+D,2BAAW,IAAX,EAAiB,KAAjB,C;O;KAF/D,C;0FAIA,yB;MAAA,+B;MAAA,2B;QAOoD,sBAAM,oBAAS,QAAT,CAAN,C;O;KAPpD,C;0FASA,yB;MAAA,+B;MAAA,2B;QAOoD,sBAAM,6BAAU,QAAY,CAAN,C;O;KAPpD,C;0F



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AuC,IAAvC,C;K;;;IATnG,kD;MAAA,iD;QAAA,gC;OAAA,0C;K;;;IAoBkC,qD;MAA0C,wB;MAC5E,sBAA2B,I;  
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DAEIC,Y;MACI,YAAY,W;MACZ,IAAI,6BAAS,mBAAT,QAAJ,C;QACI,IAAI,CAAC,cAAL,C;UAAc,MAAa,6B  
;QAC3B,iBAAU,K;;;QAEV,c9M/C+C,U8M+C/C,W9M/C0D,KAAK,K8M+CvD,W9M/CkE,KAAX,CAAhB,C;;M  
8MiDnD,OAAO,K;K;;wEC7Hf,yB;MAAA,8C;MAAA,uB;QAOI,OAAO,MAAM,CAAN,EAAS,CAAT,C;O;KAP  
X,C;wEAUA,yB;MAAA,8C;MAAA,uB;QAOI,OAAO,MAAM,CAAN,EAAS,CAAT,C;O;KAPX,C;wEAUA,yB;  
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,uB;QAOI,OAAO,MAAM,CAAN,EAAS,CAAT,C;O;KAPX,C;oFC7BA,yB;MAAA,gD;MAAA,4B;QAM6C,OAA  
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7B,ciH/O6B,C;O;K+G9CIE,C;sGAQA,yB;MAAA,kE;MAAA,4B;QAMsD,OAAQ,sBhO+QzB,cgO/QyB,C;O;KA  
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hO6PrB,cgO7PqB,ChOkWnB,C;O;KgOzWvC,C;gFASA,yB;MAAA,4C;MhOsVA,6B;MgOtVA,sC;QAayD,OhOm  
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A,4B;QAOoD,OhNuSV,egNvSmB,iBhN8LtB,cgN9LsB,ChNuSnB,C;O;KgN9S1C,C;+EASA,yB;MAAA,4C;MhN  
2RA,+B;MgN3RA,sC;QAa2D,OhNwRjB,egNxR0B,WhN+K7B,cgN/K6B,EAAW,QAAX,ChNwR1B,C;O;KgNrS1  
C,C;iFAeA,yB;M/GgEA,4C;MjG4MA,+B;MgN5QA,sC;QAa4D,OhNyQIB,eiGzMuB,WjGgG1B,ciGhG0B,EAAW  
,C+GhEK,Q/GgEL,IAAX,CjGyMvB,C;O;KgNtR1C,C;oFAeA,yB;MjOwJI,6B;MiO1SJ,gD;MAKJA,4B;QAM8C,O  
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+G0GA,4B;QAMsD,O/G1GK,MAAO,OlHuM3B,c0N1Ge,GAAZ,GxG7FA,CwG6Fb,GAA6C,EAA7C,I;O;KOO  
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QA,yB;MAAA,0D;MjO+LA,0B;MAAA,+B;MiO/LA,4B;QAOqD,OjOmMZ,eAAW,OiOnMS,kBjOgGnB,cAAL,G  
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B;MAAA,4C;MjOqJA,+B;MiOrJA,sC;QAa2D,OjOkJjB,eiOlJ0B,WjOmD7B,ciOnD6B,EAAW,QAAX,CjOkJ1B,C  
;O;KiO/J1C,C;kFAeA,yB;MAAA,8C;MjOsIA,+B;MiOtIA,sC;QAa4D,OjOmIIB,eiOnI2B,YjOoC9B,ciOpC8B,EAA  
Y,QAAX,CjOmI3B,C;O;KiOhJ1C,C;oFAeA,yB;M/NgFI,6B;M+N3SJ,gD;MA2NA,4B;QAM+C,OA3NM,ahO+Rh  
B,CCeE,cAAU,cAAL,GAAiB,KAAtB,CDfF,MgO/RgB,C;O;KAqNrD,C;oGAQA,yB;M/GnLA,iB;M+GmLA,4B;Q  
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A,yB;MPZA,kE;MOYA,4B;QAMwD,OPZoB,sBxNmCnC,cwNnCe,GAAW,KAAS,C;O;KOM5E,C;8FAQA,yB;M  
AAA,0D;M/NuHA,4B;MAAA,iC;M+NvHA,4B;QAOuD,O/N2HZ,gBAAZ,Q+N3HQ,kB/NwBrB,cAAL,GAAiB,K  
+NxBS,C/N2HR,CAAZ,C;O;K+NII3C,C;4FASA,yB;MAAA,wD;M/N8GA,4B;MAAA,iC;M+N9GA,4B;QAOsD,  
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A,4C;M/NyFA,iC;M+NzFA,sC;QAa6D,O/NsFhB,gB+Nf0B,W/NX9B,c+Nw8B,EAAW,QAAX,C/NsF1B,C;O;K  
+NnG7C,C;kFAeA,yB;MAAA,8C;M/N0EA,iC;M+N1EA,sC;QAa8D,O/NuEjB,gB+NvE2B,Y/N1B/B,c+N0B+B,E  
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d,C;QAAiB,OAAO,I;MAExB,YAAkB,4BAAK,U;MACvB,S;MAEA,gBAAgB,qBAAK,CAAL,C;MACHb,IAAI,Y  
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```
.....
.....
.....
.....
.....;So
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CH,C;kBACJ,C;iBACD,C;mBACE,C;sB3KuyCH,O;;;;uBkd3zCzB,W0JoCkC,yB1JpCIC,C;;;;CzEjFX,E;"}
```

Found in path(s):

\* /opt/cola/permits/1418559510\_1663298237.5506215/0/kotlin-1-6-10-2-tgz/package/kotlin.js.map

# 1.340 akka-protobuf 2.5.31

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```
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/CodedOutputStream.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/AbstractMessage.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/ByteString.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/UnknownFieldSet.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/Descriptors.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/RopeByteString.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/UninitializedMessageException.java
* /opt/cola/permits/1473592072_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-
jar/akka/protobuf/UnmodifiableLazyStringList.java
```

\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/AbstractMessageLite.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/Internal.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/WireFormat.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/ExtensionRegistry.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/Service.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/RpcChannel.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/FieldSet.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/ServiceException.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/MessageLite.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/LazyStringArrayList.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/MessageLiteOrBuilder.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/Parser.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/AbstractParser.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/RpcController.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/GeneratedMessageLite.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/InvalidProtocolBufferException.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/RepeatedFieldBuilder.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/BlockingRpcChannel.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/RpcCallback.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/MessageOrBuilder.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/SingleFieldBuilder.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/DynamicMessage.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/TextFormat.java  
\* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/CodedInputStream.java

- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/Message.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/RpcUtil.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/ExtensionRegistryLite.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/LazyStringList.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/GeneratedMessage.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/ProtocolMessageEnum.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/LazyField.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/LiteralByteString.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/SmallSortedMap.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/BlockingService.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/BoundedByteString.java
- \* /opt/cola/permits/1473592072\_1668494947.0636454/0/akka-protobuf-2-11-2-5-31-sources-1-jar/akka/protobuf/Utf8.java

## 1.341 jdbi3-json 3.27.2

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- \* /opt/cola/permits/1341639998\_1654785831.0209615/0/jdbi3-json-3-27-2-sources-jar/org/jdbi/v3/json/Json.java
- \* /opt/cola/permits/1341639998\_1654785831.0209615/0/jdbi3-json-3-27-2-sources-

```
jar/org/jdbi/v3/json/EncodedJson.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/JsonPlugin.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/JsonMapper.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/internal/JsonArgumentFactory.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/internal/UnimplementedJsonMapper.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/internal/JsonColumnMapperFactory.java
* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-
jar/org/jdbi/v3/json/JsonConfig.java
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```
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* /opt/cola/permits/1341639998_1654785831.0209615/0/jdbi3-json-3-27-2-sources-jar/META-
INF/maven/org.jdbi/jdbi3-json/pom.xml
```

## 1.342 reactive-streams v1.0.3

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\* /opt/cola/permits/1473577722\_1668796729.3346813/0/guice-bridge-2-5-0-jar/META-

INF/maven/org.glassfish.hk2/guice-bridge/pom.xml

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Manifest-Version: 1.0

Bundle-Description: HK2 Guice Bridge

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org/software/classpath/license.html  
Bundle-SymbolicName: org.glassfish.hk2.guice-bridge  
Archiver-Version: Plexus Archiver  
Built-By: default  
Bnd-LastModified: 1546444247427  
Bundle-ManifestVersion: 2  
Bundle-DocURL: http://www.oracle.com  
Bundle-Vendor: Oracle Corporation  
Import-Package: com.google.inject;version="[1.4,2)",com.google.inject.matcher;version="[1.4,2)",com.google.inject.spi;version="[1.4,2)",javax.inject;version="[1.0,2)",org.glassfish.hk2.api;version="[2.5,3)",org.glassfish.hk2.utilities;version="[2.5,3)",org.glassfish.hk2.utilities.reflection;version="[2.5,3)",org.jvnet.hk2.annotations;version="[2.5,3)"  
Tool: Bnd-2.1.0.20130426-122213  
Export-Package: org.jvnet.hk2.guice.bridge.api;uses:="com.google.inject,javax.inject,org.glassfish.hk2.api,org.jvnet.hk2.annotations";version="2.5.0"  
Bundle-Name: HK2 Guice Bridge  
Bundle-Version: 2.5.0  
Created-By: Apache Maven Bundle Plugin  
Build-Jdk: 1.8.0\_181

Found in path(s):

\* /opt/cola/permits/1473577722\_1668796729.3346813/0/guice-bridge-2-5-0-jar/META-INF/MANIFEST.MF

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## 1.351 automation 1.11-8

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\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/BasicAutomata.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/TransitionComparator.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/DatatypesAutomatonProvider.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/Automaton.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/Datatypes.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/SpecialOperations.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/BasicOperations.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/StatePair.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/MinimizationOperations.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/State.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/ShuffleOperations.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/RunAutomaton.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/RegExp.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/AutomatonProvider.java  
\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-jar/dk/brics/automaton/Transition.java

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\* /opt/cola/permits/1162863214\_1620924489.9/0/automaton-1-11-8-sources-6-  
jar/dk/brics/automaton/AutomatonMatcher.java

## 1.352 feign-jackson 8.18.0

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\* /opt/cola/permits/1274699876\_1645234767.83/0/feign-jackson-8-18-0-sources-  
jar/feign/jackson/JacksonEncoder.java  
\* /opt/cola/permits/1274699876\_1645234767.83/0/feign-jackson-8-18-0-sources-  
jar/feign/jackson/JacksonDecoder.java

# 1.353 metrics-integration-for-logback 4.1.29

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Manifest-Version: 1.0  
Automatic-Module-Name: com.codahale.metrics.logback  
Build-Jdk-Spec: 1.8  
Bundle-Description: An instrumented appender for Logback.  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: Metrics Integration for Logback  
Bundle-SymbolicName: io.dropwizard.metrics.logback  
Bundle-Version: 4.1.29  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.logback;uses:="ch.qos.logback.classic.spi,ch.qos.logback.core,com.codahale.metrics";version="4.1.29"  
Implementation-Title: Metrics Integration for Logback  
Implementation-Version: 4.1.29  
Import-Package: ch.qos.logback.classic;version="[1.2,2)",ch.qos.logback.classic.spi;version="[1.2,2)",ch.qos.logback.core;version="[1.2,2)",com.codahale.metrics;version="[4.1,5)"  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473591969\_1668802080.1865313/0/metrics-logback-4-1-29-jar/META-INF/MANIFEST.MF

# 1.354 hystrix-metrics-event-stream 1.5.18

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* /opt/cola/permits/1341639961_1654809995.3473003/0/caffeine-3-0-3-sources-
jar/com/github/benmanes/caffeine/cache/MpscGrowableArrayQueue.java
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```

```
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\*/

Found in path(s):

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/StripedBuffer.java

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Found in path(s):

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/Expiry.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/TimerWheel.java

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Found in path(s):

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/AsyncCache.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/LocalAsyncCache.java

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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/AsyncCacheLoader.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/CaffeineSpec.java

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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/SSLMWAR.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-

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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/WILMWR.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/WSW.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/SILMSAW.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/PWARMW.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/WILMWAW.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/WSLMSAR.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/SSAR.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/WIWR.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/SIMWW.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-

jar/com/github/benmanes/caffeine/cache/WSLMSR.java

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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-jar/com/github/benmanes/caffeine/cache/Pacer.java

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\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-jar/com/github/benmanes/caffeine/cache/FrequencySketch.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-jar/com/github/benmanes/caffeine/cache/Buffer.java

\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-

jar/com/github/benmanes/caffeine/cache/Async.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/LocalAsyncLoadingCache.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/References.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/stats/package-info.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
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jar/com/github/benmanes/caffeine/cache/BoundedBuffer.java  
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jar/com/github/benmanes/caffeine/cache/SerializationProxy.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/LocalCache.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/stats/GuardedStatsCounter.java  
\* /opt/cola/permits/1341639961\_1654809995.3473003/0/caffeine-3-0-3-sources-  
jar/com/github/benmanes/caffeine/cache/LocalManualCache.java

# 1.356 zip4j 2.10.0

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# 1.357 fabric8-::-kubernetes-model-::-common

## 4.10.3

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## 1.358 netty/transport/classes/epoll

### 4.1.76.Final

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Manifest-Version: 1.0

Implementation-Title: Netty/Transport/Classes/Epoll

Bundle-Description: Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers and clients.

Automatic-Module-Name: io.netty.transport.classes.epoll

Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0>

Bundle-SymbolicName: io.netty.transport-classes-epoll

Implementation-Version: 4.1.76.Final

Built-By: root

Bnd-LastModified: 1649784029628

Bundle-ManifestVersion: 2

Implementation-Vendor-Id: io.netty

Bundle-DocURL: <https://netty.io/>

Bundle-Vendor: The Netty Project

Import-Package: io.netty.buffer;version="[4.1,5)",io.netty.channel,io.netty.channel.socket;version="[4.1,5)",io.netty.channel.unix;version="[4.1,5)",io.netty.util;version="[4.1,5)",io.netty.util.collection;version="[4.1,5)",io.netty.util.concurrent;version="[4.1,5)",io.netty.util.internal;version="[4.1,5)",io.netty.util.internal.logging;version="[4.1,5)",sun.nio.ch;resolution:=optional,org.eclipse.jetty.npn;version="[1,2)";resolution:=optional,org.eclipse.jetty.alpn;version="[1,2)";resolution:=optional

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.6))"

Tool: Bnd-2.4.1.201501161923

Implementation-Vendor: The Netty Project

Export-Package: io.netty.channel.epoll;uses:="io.netty.buffer,io.netty.channel,io.netty.channel.socket,io.netty.channel.unix,io.netty.util,io.netty.util.concurrent";version="4.1.76"

Bundle-Name: Netty/Transport/Classes/Epoll

Bundle-Version: 4.1.76.Final

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_322

Implementation-URL: <https://netty.io/netty-transport-classes-epoll/>

Found in path(s):

\* /opt/cola/permits/1340031687\_1654680249.7624245/0/netty-transport-classes-epoll-4-1-76-final-jar/META-INF/MANIFEST.MF

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\* /opt/cola/permits/1340031687\_1654680249.7624245/0/netty-transport-classes-epoll-4-1-76-final-jar/META-INF/maven/io.netty/netty-transport-classes-epoll/pom.xml

## 1.359 akka-http 10.1.12

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# 1.360 testcontainers-::-apache-kafka 1.16.0

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neo4j:3.5.0-enterprise

a

b

mcr.microsoft.com/mssql/server:2017-CU12

## 1.361 error\_prone\_annotations 2.7.1

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\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/NoAllocation.java

\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/concurrent/LockMethod.java

\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/concurrent/UnlockMethod.java

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\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/DoNotCall.java

\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/concurrent/GuardedBy.java

\* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/CheckReturnValue.java

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- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/CompatibleWith.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/RestrictedApi.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/MustBeClosed.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/DoNotMock.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/FormatMethod.java

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- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/concurrent/LazyInit.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/IncompatibleModifiers.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/RequiredModifiers.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/Immutable.java
- \* /opt/cola/permits/1288519880\_1647351834.56/0/error-prone-annotations-2-7-1-sources-jar/com/google/errorprone/annotations/CompileTimeConstant.java

```
* /opt/cola/permits/1288519880_1647351834.56/0/error-prone-annotations-2-7-1-sources-
jar/com/google/errorprone/annotations/SuppressPackageLocation.java
* /opt/cola/permits/1288519880_1647351834.56/0/error-prone-annotations-2-7-1-sources-
jar/com/google/errorprone/annotations/ForOverride.java
* /opt/cola/permits/1288519880_1647351834.56/0/error-prone-annotations-2-7-1-sources-
jar/com/google/errorprone/annotations/CanIgnoreReturnValue.java
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* /opt/cola/permits/1288519880_1647351834.56/0/error-prone-annotations-2-7-1-sources-
jar/com/google/errorprone/annotations/InlineMeValidationDisabled.java
* /opt/cola/permits/1288519880_1647351834.56/0/error-prone-annotations-2-7-1-sources-
jar/com/google/errorprone/annotations/InlineMe.java
```

# 1.362 fabric8-::-kubernetes-model-::-events

## 4.10.3

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# 1.363 micronaut-coherence 3.0.1

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io.micronaut.coherence.config.MicronautSystemPropertyResolver

Found in path(s):

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/META-INF/services/com.tangosol.coherence.config.SystemPropertyResolver  
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```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/config/CoherenceDefaultProperties.java
```

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/namespace/BeanBuilder.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/package-info.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/CoherenceContext.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/grpc/GrpcServerBuilder.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/SessionType.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/namespace/BeanProcessor.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/SubscriberExecutorServiceConfig.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/config/MicronautSystemPropertyResolver.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/namespace/package-info.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/package-info.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/SessionConfigurationProvider.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/AbstractSessionConfigurationBean.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/namespace/MicronautNamespaceHandler.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/TopicKey.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/JsonSerializerFactory.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/grpc/GrpcServerConfigurer.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/grpc/package-info.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/SerializerFactories.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/SessionConfigurationBean.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/InjectorImpl.java

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```

io.micronaut.coherence.grpc.GrpcServerBuilder\$GrpcServerBuilderProviderBean

Found in path(s):

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/META-INF/services/com.oracle.coherence.grpc.proxy.GrpcServerBuilderProvider
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```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/FilterFactories.java
```

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/ExtractorFactory.java
```

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Updated.java
```

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/WhereFilter.java
```

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/EventArgumentBinder.java
```

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/NamedTopicFactories.java
```

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* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Activated.java
```

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/MapEventTransformerBinding.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Committed.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/CoherenceEventListener.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/ElementBinder.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Scope.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/package-info.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Utils.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/AnnotationLiteral.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/SerializerFormat.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Departed.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Removed.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Stopping.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ChainedExtractor.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Syncing.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/PropertyExtractor.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Started.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/FilterFactory.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Stopped.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Departing.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Error.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ParticipantName.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/exceptions/CoherenceSubscriberException.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/MapEventTransformerFactory.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/FilterBinding.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Synced.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/AnnotatedElementBinder.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/EventArgumentBinderRegistry.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Starting.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ConfigUri.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Inserted.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/SubscriberGroup.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ScopeName.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/CoherenceTopicListener.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/CoherencePublisherIntroductionAdvice.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Executing.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/CoherencePublisher.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/ExtractorFactories.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/SubscriberExceptionHandler.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/TypedElementBinder.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Inserting.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/PofExtractor.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/ElementValueBinder.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/CoherenceEventListenerProcessor.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/AlwaysFilter.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Destroyed.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Deleted.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Rollback.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/AnnotatedMapListener.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Arrived.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Truncated.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/CoherenceTopicListenerProcessor.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ExtractorBinding.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Created.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/ServiceName.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/DefaultTopicBinder.java

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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Topic.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Replicating.java

\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Updating.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/CacheName.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Name.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Backlog.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/messaging/binders/ElementArgumentBinderRegistry.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Removing.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Activating.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/EventObserverSupport.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/CoherenceFactory.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Lite.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/MapName.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Topics.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/event/ExecutableMethodEventObserver.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Disposing.java  
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\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/annotation/Lost.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/NamedCacheFactories.java  
\* /opt/cola/permits/1331473926\_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/io/micronaut/coherence/MapEventTransformerFactories.java

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io.micronaut.coherence.grpc.GrpcServerConfigurer\$GrpcServerConfigurationBean

Found in path(s):

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/META-  
INF/services/com.oracle.coherence.grpc.proxy.GrpcServerConfiguration  
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```

io.micronaut.coherence.InjectorImpl

Found in path(s):

```
* /opt/cola/permits/1331473926_1653068590.7919037/0/micronaut-coherence-3-0-1-sources-jar/META-  
INF/services/com.oracle.coherence.inject.Injector
```

# 1.364 dropwizard-jackson-support 2.0.28

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# 1.365 apache-yetus-audience-annotations

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## 1.368 swagger-integration 2.1.6

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Manifest-Version: 1.0

Automatic-Module-Name: io.swagger.v3.oas.integration

Bnd-LastModified: 1607101128644

Build-Jdk: 1.8.0\_275

Built-By: runner

Bundle-Description: swagger-integration

Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>

Bundle-ManifestVersion: 2

Bundle-Name: swagger-integration

Bundle-SymbolicName: io.swagger.core.v3.swagger-integration  
Bundle-Version: 2.1.6  
Created-By: Apache Maven Bundle Plugin  
Export-Package: io.swagger.v3.oas.integration;uses:="com.fasterxml.jac  
kson.databind,io.swagger.v3.core.converter,io.swagger.v3.core.util,io  
.swagger.v3.oas.integration.api,io.swagger.v3.oas.models,org.apache.c  
ommons.lang3.tuple,org.slf4j";version="2.1.6",io.swagger.v3.oas.integ  
ration.api;uses:="com.fasterxml.jackson.databind,io.swagger.v3.core.c  
onverter,io.swagger.v3.oas.integration,io.swagger.v3.oas.models";vers  
ion="2.1.6"  
implementation-version: 2.1.6  
Import-Package: com.fasterxml.jackson.annotation;version="[2.11,3)",co  
m.fasterxml.jackson.databind;version="[2.11,3)",com.fasterxml.jackson  
.databind.annotation;version="[2.11,3)",io.github.classgraph;version=  
"[4.8,5)",io.swagger.v3.core.converter;version="[2.1,3)",io.swagger.v  
3.core.jackson;version="[2.1,3)",io.swagger.v3.core.util;version="[2.  
1,3)",io.swagger.v3.oas.annotations;version="[2.1,3)",io.swagger.v3.o  
as.integration,io.swagger.v3.oas.integration.api,io.swagger.v3.oas.mo  
dels;version="[2.1,3)",io.swagger.v3.oas.models.media;version="[2.1,3  
)",org.apache.commons.lang3;version="[3.7,4)",org.apache.commons.lang  
3.tuple;version="[3.7,4)",org.slf4j;version="[1.7,2)"  
mode: development  
package: io.swagger  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-4.2.0.201903051501  
url: [https://github.com/swagger-api/swagger-core/modules/swagger-integ  
ration](https://github.com/swagger-api/swagger-core/modules/swagger-integration)

Found in path(s):

\* /opt/cola/permits/1115978497\_1654757459.531438/0/swagger-integration-2-1-6-jar/META-INF/MANIFEST.MF

## 1.369 io-swagger-swagger-annotations 1.6.2

### 1.369.1 Available under license :

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Manifest-Version: 1.0  
Bnd-LastModified: 1593602041104  
Build-Jdk: 1.8.0\_151  
Built-By: frantuma  
Bundle-Description: Sonatype helps open source projects to set up Mave  
n repositories on <https://oss.sonatype.org/>  
Bundle-License: <http://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: swagger-annotations  
Bundle-SymbolicName: io.swagger.annotations  
Bundle-Version: 1.6.2

Created-By: Apache Maven Bundle Plugin  
Export-Package: io.swagger.annotations;version="1.6.2"  
implementation-version: 1.6.2  
mode: development  
package: io.swagger  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.7))"  
Tool: Bnd-3.3.0.201609221906  
url: <https://github.com/swagger-api/swagger-core/modules/swagger-annotations>

Found in path(s):

\* /opt/cola/permits/1170799104\_1654737045.2729578/0/swagger-annotations-1-6-2-jar/META-INF/MANIFEST.MF

## 1.370 jetty-toolchain 1.0.4

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\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/Group.java  
\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/SetUIDServer.java  
\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/SetUID.java  
\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/Passwd.java  
\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/RLimit.java  
\* /opt/cola/permits/1293852964\_1649804864.87/0/jetty-setuid-java-1-0-4-sources-jar/org/eclipse/jetty/setuid/SetUIDListener.java

## 1.371 metrics-integration-for-jersey-2.x 4.1.29

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Manifest-Version: 1.0

Automatic-Module-Name: com.codahale.metrics.jersey2  
Build-Jdk-Spec: 1.8  
Bundle-Description: A set of class providing Metrics integration for Jersey, the reference JAX-RS implementation.  
Bundle-License: <https://www.apache.org/licenses/LICENSE-2.0.html>  
Bundle-ManifestVersion: 2  
Bundle-Name: Metrics Integration for Jersey 2.x  
Bundle-SymbolicName: io.dropwizard.metrics.jersey2  
Bundle-Version: 4.1.29  
Created-By: Apache Maven Bundle Plugin  
Export-Package: com.codahale.metrics.jersey2;uses:="com.codahale.metrics, javax.ws.rs.core, javax.ws.rs.ext, org.glassfish.jersey.server.model, org.glassfish.jersey.server.monitoring";version="4.1.29"  
Implementation-Title: Metrics Integration for Jersey 2.x  
Implementation-Version: 4.1.29  
Import-Package: com.codahale.metrics;version="[4.1,5)", com.codahale.metrics.annotation;version="[4.1,5)", javax.ws.rs.core;version="[2.1,3)", javax.ws.rs.ext;version="[2.1,3)", org.glassfish.jersey.server;version="[2.35,3)", org.glassfish.jersey.server.model;version="[2.35,3)", org.glassfish.jersey.server.monitoring;version="[2.35,3)"  
Require-Capability: osgi.ee;filter:="(&(osgi.ee=JavaSE)(version=1.8))"  
Tool: Bnd-5.1.1.202006162103

Found in path(s):

\* /opt/cola/permits/1473592371\_1668798048.010335/0/metrics-jersey2-4-1-29-jar/META-INF/MANIFEST.MF

## 1.372 jackson-jaxrs 2.13.3

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# 1.374 leveldb-api 0.12

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\* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/Options.java

- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/Range.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/DBIterator.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/Logger.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/DBException.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/Snapshot.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/ReadOptions.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/DB.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/DBComparator.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/WriteBatch.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/DBFactory.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/CompressionType.java
- \* /opt/cola/permits/1473592144\_1668494818.0447748/0/leveldb-api-0-12-sources-2-jar/org/iq80/leveldb/WriteOptions.java

# 1.375 okio 2.8.0

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- \* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Utf8.kt

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```

Found in path(s):

```
 * /opt/cola/permits/1340031362_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/-
DeprecatedUpgrade.kt
 * /opt/cola/permits/1340031362_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/-
DeprecatedUtf8.kt
 * /opt/cola/permits/1340031362_1654618471.6843367/0/okio-2-8-0-sources-2-
jar/commonMain/okio/PeekSource.kt
 * /opt/cola/permits/1340031362_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/-
DeprecatedOkio.kt
 * /opt/cola/permits/1340031362_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Throttler.kt
```

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/-Base64.kt  
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Found in path(s):

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/SegmentPool.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Sink.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Source.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/BufferedSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/BufferedSink.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Buffer.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Timeout.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-

jar/commonMain/okio/SegmentPool.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-

jar/jvmMain/okio/ForwardingSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/JvmOkio.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/InflaterSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Segment.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/GzipSink.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/DeflaterSink.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/AsyncTimeout.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-

jar/jvmMain/okio/RealBufferedSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/ForwardingSink.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/GzipSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-

jar/jvmMain/okio/RealBufferedSink.kt

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/SegmentedByteString.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/ForwardingTimeout.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/SegmentedByteString.kt

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/-Util.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/-Platform.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/-Platform.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/ByteString.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/internal/-Utf8.kt

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/Pipe.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/jvmMain/okio/HashingSource.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Options.kt

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/internal/SegmentedByteString.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/internal/RealBufferedSink.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/internal/RealBufferedSource.kt

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\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Okio.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/internal/Buffer.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/BufferedSource.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/BufferedSink.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Timeout.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Source.kt

\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/RealBufferedSink.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/RealBufferedSource.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Buffer.kt  
\* /opt/cola/permits/1340031362\_1654618471.6843367/0/okio-2-8-0-sources-2-jar/commonMain/okio/Sink.kt

# 1.376 apache-log4j-slf4j-binding 2.17.1

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# 1.377 fabric8-::-kubernetes-model-::-storage-class 4.10.3

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Found in path(s):

```
* /opt/cola/permits/1337069668_1654218635.2626/0/kubernetes-model-storageclass-4-10-3-jar/ValidationMessages.properties
```

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Manifest-Version: 1.0

Bnd-LastModified: 1594746520780  
Build-Jdk: 14.0.1  
Build-Timestamp: \${build.datetime}  
Built-By: rohaan  
Bundle-Description: Java client for Kubernetes and OpenShift  
Bundle-DocURL: http://redhat.com  
Bundle-License: http://www.apache.org/licenses/LICENSE-2.0.txt  
Bundle-ManifestVersion: 2  
Bundle-Name: Fabric8 :: Kubernetes Model :: Storage Class  
Bundle-SymbolicName: io.fabric8.kubernetes-model-storageclass  
Bundle-Vendor: Red Hat  
Bundle-Version: 4.10.3  
Created-By: Apache Maven Bundle Plugin  
Export-Package: io.fabric8.kubernetes.api.model.storage;uses:="com.fasterxml.jackson.annotation,com.fasterxml.jackson.databind,com.fasterxml.jackson.databind.annotation,io.fabric8.kubernetes.api.builder,io.fabric8.kubernetes.api.model,io.fabric8.kubernetes.model.annotation";version="4.10.3",io.fabric8.kubernetes.api.model.storage.v1beta1;uses:="com.fasterxml.jackson.annotation,com.fasterxml.jackson.databind,com.fasterxml.jackson.databind.annotation,io.fabric8.kubernetes.api.builder,io.fabric8.kubernetes.api.model,io.fabric8.kubernetes.model.annotation";version="4.10.3"  
Implementation-Title: Fabric8 :: Kubernetes Model :: Storage Class  
Implementation-URL: http://fabric8.io/kubernetes-model-generator/kubernetes-model-storageclass/  
Implementation-Vendor: Red Hat  
Implementation-Vendor-Id: io.fabric8  
Implementation-Version: 4.10.3  
Import-Package: com.fasterxml.jackson.annotation;version="[2.10,3)",com.fasterxml.jackson.databind;version="[2.10,3)",com.fasterxml.jackson.databind.annotation;version="[2.10,3)",io.fabric8.kubernetes.api.builder;version="[4.10,5)",io.fabric8.kubernetes.api.model,io.fabric8.kubernetes.model.annotation;version="[4.10,5)"  
Java-Vendor: Oracle Corporation  
Java-Version: 14.0.1  
Os-Arch: amd64  
Os-Name: Linux  
Os-Version: 5.6.19-300.fc32.x86\_64  
Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"  
Scm-Connection: scm:git:git@github.com:fabric8io/kubernetes-client.git/kubernetes-model-generator/kubernetes-model-storageclass  
Scm-Revision: \${buildNumber}  
Scm-Url: http://github.com/fabric8io/kubernetes-client/kubernetes-model-generator/kubernetes-model-storageclass/  
Specification-Title: Fabric8 :: Kubernetes Model :: Storage Class  
Specification-Vendor: Red Hat  
Specification-Version: 4.10.3  
Tool: Bnd-4.2.0.201903051501

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\* /opt/cola/permits/1337069668\_1654218635.2626/0/kubernetes-model-storageclass-4-10-3-jar/META-INF/MANIFEST.MF

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\* /opt/cola/permits/1337069668\_1654218635.2626/0/kubernetes-model-storageclass-4-10-3-jar/META-INF/maven/io.fabric8/kubernetes-model-storageclass/pom.xml

# 1.378 micronaut-mongodb 4.1.0

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 */
```

Found in path(s):

```
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/convert/StringToServerAddressConverter.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/convert/package-info.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/convert/StringToReadConcernConverter.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/convert/MongoConverterRegistrar.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/convert/StringToWriteConcernConverter.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/MongoSettings.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/test/AbstractMongoProcessFactory.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/DefaultMongoConfiguration.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/NamedMongoConfiguration.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/AbstractMongoConfiguration.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/test/MongoProcessFactory.java
* /opt/cola/permits/1331473860_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-
jar/io/micronaut/configuration/mongo/core/DefaultMongoClientSettingsFactory.java
```

\* /opt/cola/permits/1331473860\_1653514577.0135384/0/micronaut-mongo-core-4-1-0-sources-jar/io/micronaut/configuration/mongo/core/convert/StringToReadPreferenceConverter.java

# 1.379 java-servlet-api 4.0.4

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<![CDATA[

Comments to: [servlet-dev@eclipse.org](mailto:servlet-dev@eclipse.org).<br>

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Found in path(s):

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/META-INF/maven/jakarta.servlet/jakarta.servlet-api/pom.xml

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Manifest-Version: 1.0

Bundle-License: <http://www.eclipse.org/legal/epl-2.0>, <https://www.gnu.org/software/classpath/license.html>

Bundle-SymbolicName: jakarta.servlet-api

Archiver-Version: Plexus Archiver

Built-By: default

Bnd-LastModified: 1592488669617

Implementation-Vendor-Id: org.eclipse

Bundle-DocURL: <https://www.eclipse.org>

Import-Package: javax.servlet, javax.servlet.annotation, javax.servlet.descriptor

Require-Capability: osgi.ee;filter="(&(osgi.ee=JavaSE)(version=1.8))"

Export-Package: javax.servlet;uses:="javax.servlet.annotation,javax.serv  
rlet.descriptor";version="4.0.0",javax.servlet.annotation;uses:="jav  
ax.servlet";version="4.0.0",javax.servlet.descriptor;version="4.0.0",  
javax.servlet.http;uses:="javax.servlet";version="4.0.0"

Bundle-Name: Jakarta Servlet

Extension-Name: javax.servlet

Bundle-Description: Jakarta Servlet 4.0

Automatic-Module-Name: java.servlet

Implementation-Version: 4.0.4

Bundle-ManifestVersion: 2

Specification-Vendor: Eclipse Foundation

Bundle-Vendor: Eclipse Foundation

Tool: Bnd-4.0.0.201805111645

Implementation-Vendor: Eclipse Foundation

Bundle-Version: 4.0.0

Created-By: Apache Maven Bundle Plugin

Build-Jdk: 1.8.0\_202

Specification-Version: 4.0

Found in path(s):

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/META-  
INF/MANIFEST.MF

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Found in path(s):

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-  
jar/javax/servlet/descriptor/package.html

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Found in path(s):

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/annotation/package.html

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/opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/annotation/ServletSecurity\$TransportGuarantee.class: binary file matches

Found in path(s):

\* /bin/grep

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Found in path(s):

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/http/LocalStrings\_ja.properties

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/http/LocalStrings.properties

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/http/LocalStrings\_fr.properties

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/LocalStrings\_ja.properties

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/http/LocalStrings\_es.properties

\* /opt/cola/permits/1473592191\_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-

```
jar/javax/servlet/LocalStrings.properties
* /opt/cola/permits/1473592191_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-
jar/javax/servlet/LocalStrings_fr.properties
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Found in path(s):

```
* /opt/cola/permits/1473592191_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-
jar/javax/servlet/http/package.html
* /opt/cola/permits/1473592191_1668494743.5916002/0/jakarta-servlet-api-4-0-4-2-jar/javax/servlet/package.html
```

# 1.380 netty-project 4.1.76.Final

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Found in path(s):

```
* /opt/cola/permits/1274701436_1645235201.06/0/argparse4j-0-8-1-sources-
jar/net/sourceforge/argparse4j/inf/ArgumentType.java
* /opt/cola/permits/1274701436_1645235201.06/0/argparse4j-0-8-1-sources-
jar/net/sourceforge/argparse4j/inf/ArgumentParser.java
* /opt/cola/permits/1274701436_1645235201.06/0/argparse4j-0-8-1-sources-
```

jar/net/sourceforge/argparse4j/helper/CJKTextWidthCounter.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/HelpArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/helper/PrefixPattern.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/helper/TextWidthCounter.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/UnrecognizedArgumentException.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/annotation/Arg.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/ArgumentParserException.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/StoreConstArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/ArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/Arguments.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/ArgumentGroup.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/Subparsers.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/helper/ReflectHelper.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/UnrecognizedCommandException.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/StoreArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/Namespace.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/choice/CollectionArgumentChoice.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/ArgumentParsers.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/ArgumentParserImpl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/StoreFalseArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/AppendConstArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/ArgumentGroupImpl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/Argument.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/ArgumentChoice.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-

jar/net/sourceforge/argparse4j/inf/FeatureControl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/choice/RangeArgumentChoice.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/SubparsersImpl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/SubparserImpl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/Subparser.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/StringArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/AppendArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/helper/ASCIITextWidthCounter.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/FileVerification.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/helper/TextHelper.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/EnumArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/StoreTrueArgumentAction.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/ConstructorArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/ParseState.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/ArgumentImpl.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/action/VersionArgumentAction.java  
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\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/CaseInsensitiveEnumStringArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/CaseInsensitiveEnumNameArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/EnumStringArgumentType.java  
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\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/impl/type/BooleanArgumentType.java  
\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/inf/MetavarInference.java

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```
*/opt/cola/permits/1274701436_1645235201.06/0/argparse4j-0-8-1-sources-
jar/net/sourceforge/argparse4j/impl/type/FileArgumentType.java
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\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-jar/net/sourceforge/argparse4j/helper/HelpScreenException.java

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\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-jar/net/sourceforge/argparse4j/impl/action/CountArgumentAction.java

\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-jar/net/sourceforge/argparse4j/impl/type/ReflectArgumentType.java

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jar/net/sourceforge/argparse4j/inf/MutuallyExclusiveGroup.java  
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\* /opt/cola/permits/1274701436\_1645235201.06/0/argparse4j-0-8-1-sources-  
jar/net/sourceforge/argparse4j/internal/TerminalWidth.java

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