| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Elements.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/javax/lang/model/util/ElementKindVisitor6.html)   [**NEXT CLASS**](http://docs.google.com/javax/lang/model/util/ElementScanner6.html) | [**FRAMES**](http://docs.google.com/index.html?javax/lang/model/util/Elements.html)    [**NO FRAMES**](http://docs.google.com/Elements.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

## **javax.lang.model.util**

Interface Elements

public interface **Elements**

Utility methods for operating on program elements.

**Compatibility Note:** Methods may be added to this interface in future releases of the platform.

**Since:** 1.6 **See Also:**[ProcessingEnvironment.getElementUtils()](http://docs.google.com/javax/annotation/processing/ProcessingEnvironment.html#getElementUtils())

| **Method Summary** | |
| --- | --- |
| [List](http://docs.google.com/java/util/List.html)<? extends [AnnotationMirror](http://docs.google.com/javax/lang/model/element/AnnotationMirror.html)> | [**getAllAnnotationMirrors**](http://docs.google.com/javax/lang/model/util/Elements.html#getAllAnnotationMirrors(javax.lang.model.element.Element))([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)            Returns all annotations of an element, whether inherited or directly present. |
| [List](http://docs.google.com/java/util/List.html)<? extends [Element](http://docs.google.com/javax/lang/model/element/Element.html)> | [**getAllMembers**](http://docs.google.com/javax/lang/model/util/Elements.html#getAllMembers(javax.lang.model.element.TypeElement))([TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)            Returns all members of a type element, whether inherited or declared directly. |
| [Name](http://docs.google.com/javax/lang/model/element/Name.html) | [**getBinaryName**](http://docs.google.com/javax/lang/model/util/Elements.html#getBinaryName(javax.lang.model.element.TypeElement))([TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)            Returns the *binary name* of a type element. |
| [String](http://docs.google.com/java/lang/String.html) | [**getConstantExpression**](http://docs.google.com/javax/lang/model/util/Elements.html#getConstantExpression(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) value)            Returns the text of a *constant expression* representing a primitive value or a string. |
| [String](http://docs.google.com/java/lang/String.html) | [**getDocComment**](http://docs.google.com/javax/lang/model/util/Elements.html#getDocComment(javax.lang.model.element.Element))([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)            Returns the text of the documentation ("Javadoc") comment of an element. |
| [Map](http://docs.google.com/java/util/Map.html)<? extends [ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html),? extends [AnnotationValue](http://docs.google.com/javax/lang/model/element/AnnotationValue.html)> | [**getElementValuesWithDefaults**](http://docs.google.com/javax/lang/model/util/Elements.html#getElementValuesWithDefaults(javax.lang.model.element.AnnotationMirror))([AnnotationMirror](http://docs.google.com/javax/lang/model/element/AnnotationMirror.html) a)            Returns the values of an annotation's elements, including defaults. |
| [Name](http://docs.google.com/javax/lang/model/element/Name.html) | [**getName**](http://docs.google.com/javax/lang/model/util/Elements.html#getName(java.lang.CharSequence))([CharSequence](http://docs.google.com/java/lang/CharSequence.html) cs)            Return a name with the same sequence of characters as the argument. |
| [PackageElement](http://docs.google.com/javax/lang/model/element/PackageElement.html) | [**getPackageElement**](http://docs.google.com/javax/lang/model/util/Elements.html#getPackageElement(java.lang.CharSequence))([CharSequence](http://docs.google.com/java/lang/CharSequence.html) name)            Returns a package given its fully qualified name. |
| [PackageElement](http://docs.google.com/javax/lang/model/element/PackageElement.html) | [**getPackageOf**](http://docs.google.com/javax/lang/model/util/Elements.html#getPackageOf(javax.lang.model.element.Element))([Element](http://docs.google.com/javax/lang/model/element/Element.html) type)            Returns the package of an element. |
| [TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) | [**getTypeElement**](http://docs.google.com/javax/lang/model/util/Elements.html#getTypeElement(java.lang.CharSequence))([CharSequence](http://docs.google.com/java/lang/CharSequence.html) name)            Returns a type element given its canonical name. |
| boolean | [**hides**](http://docs.google.com/javax/lang/model/util/Elements.html#hides(javax.lang.model.element.Element,%20javax.lang.model.element.Element))([Element](http://docs.google.com/javax/lang/model/element/Element.html) hider, [Element](http://docs.google.com/javax/lang/model/element/Element.html) hidden)            Tests whether one type, method, or field hides another. |
| boolean | [**isDeprecated**](http://docs.google.com/javax/lang/model/util/Elements.html#isDeprecated(javax.lang.model.element.Element))([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)            Returns true if the element is deprecated, false otherwise. |
| boolean | [**overrides**](http://docs.google.com/javax/lang/model/util/Elements.html#overrides(javax.lang.model.element.ExecutableElement,%20javax.lang.model.element.ExecutableElement,%20javax.lang.model.element.TypeElement))([ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html) overrider, [ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html) overridden, [TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)            Tests whether one method, as a member of a given type, overrides another method. |
| void | [**printElements**](http://docs.google.com/javax/lang/model/util/Elements.html#printElements(java.io.Writer,%20javax.lang.model.element.Element...))([Writer](http://docs.google.com/java/io/Writer.html) w, [Element](http://docs.google.com/javax/lang/model/element/Element.html)... elements)            Prints a representation of the elements to the given writer in the specified order. |

| **Method Detail** |
| --- |

### getPackageElement

[PackageElement](http://docs.google.com/javax/lang/model/element/PackageElement.html) **getPackageElement**([CharSequence](http://docs.google.com/java/lang/CharSequence.html) name)

Returns a package given its fully qualified name.

**Parameters:**name - fully qualified package name, or "" for an unnamed package **Returns:**the named package, or null if it cannot be found

### getTypeElement

[TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) **getTypeElement**([CharSequence](http://docs.google.com/java/lang/CharSequence.html) name)

Returns a type element given its canonical name.

**Parameters:**name - the canonical name **Returns:**the named type element, or null if it cannot be found

### getElementValuesWithDefaults

[Map](http://docs.google.com/java/util/Map.html)<? extends [ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html),? extends [AnnotationValue](http://docs.google.com/javax/lang/model/element/AnnotationValue.html)> **getElementValuesWithDefaults**([AnnotationMirror](http://docs.google.com/javax/lang/model/element/AnnotationMirror.html) a)

Returns the values of an annotation's elements, including defaults.

**Parameters:**a - annotation to examine **Returns:**the values of the annotation's elements, including defaults**See Also:**[AnnotationMirror.getElementValues()](http://docs.google.com/javax/lang/model/element/AnnotationMirror.html#getElementValues())

### getDocComment

[String](http://docs.google.com/java/lang/String.html) **getDocComment**([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)

Returns the text of the documentation ("Javadoc") comment of an element.

**Parameters:**e - the element being examined **Returns:**the documentation comment of the element, or null if there is none

### isDeprecated

boolean **isDeprecated**([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)

Returns true if the element is deprecated, false otherwise.

**Parameters:**e - the element being examined **Returns:**true if the element is deprecated, false otherwise

### getBinaryName

[Name](http://docs.google.com/javax/lang/model/element/Name.html) **getBinaryName**([TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)

Returns the *binary name* of a type element.

**Parameters:**type - the type element being examined **Returns:**the binary name**See Also:**[TypeElement.getQualifiedName()](http://docs.google.com/javax/lang/model/element/TypeElement.html#getQualifiedName())**See**  [**The Java Language Specification, Third Edition**](http://java.sun.com/docs/books/jls/)**:** 13.1 The Form of a Binary

### getPackageOf

[PackageElement](http://docs.google.com/javax/lang/model/element/PackageElement.html) **getPackageOf**([Element](http://docs.google.com/javax/lang/model/element/Element.html) type)

Returns the package of an element. The package of a package is itself.

**Parameters:**type - the element being examined **Returns:**the package of an element

### getAllMembers

[List](http://docs.google.com/java/util/List.html)<? extends [Element](http://docs.google.com/javax/lang/model/element/Element.html)> **getAllMembers**([TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)

Returns all members of a type element, whether inherited or declared directly. For a class the result also includes its constructors, but not local or anonymous classes.

Note that elements of certain kinds can be isolated using methods in [ElementFilter](http://docs.google.com/javax/lang/model/util/ElementFilter.html).

**Parameters:**type - the type being examined **Returns:**all members of the type**See Also:**[Element.getEnclosedElements()](http://docs.google.com/javax/lang/model/element/Element.html#getEnclosedElements())

### getAllAnnotationMirrors

[List](http://docs.google.com/java/util/List.html)<? extends [AnnotationMirror](http://docs.google.com/javax/lang/model/element/AnnotationMirror.html)> **getAllAnnotationMirrors**([Element](http://docs.google.com/javax/lang/model/element/Element.html) e)

Returns all annotations of an element, whether inherited or directly present.

**Parameters:**e - the element being examined **Returns:**all annotations of the element**See Also:**[Element.getAnnotationMirrors()](http://docs.google.com/javax/lang/model/element/Element.html#getAnnotationMirrors())

### hides

boolean **hides**([Element](http://docs.google.com/javax/lang/model/element/Element.html) hider,  
 [Element](http://docs.google.com/javax/lang/model/element/Element.html) hidden)

Tests whether one type, method, or field hides another.

**Parameters:**hider - the first elementhidden - the second element **Returns:**true if and only if the first element hides the second

### overrides

boolean **overrides**([ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html) overrider,  
 [ExecutableElement](http://docs.google.com/javax/lang/model/element/ExecutableElement.html) overridden,  
 [TypeElement](http://docs.google.com/javax/lang/model/element/TypeElement.html) type)

Tests whether one method, as a member of a given type, overrides another method. When a non-abstract method overrides an abstract one, the former is also said to *implement* the latter.

In the simplest and most typical usage, the value of the type parameter will simply be the class or interface directly enclosing overrider (the possibly-overriding method). For example, suppose m1 represents the method String.hashCode and m2 represents Object.hashCode. We can then ask whether m1 overrides m2 within the class String (it does):

assert elements.overrides(m1, m2, elements.getTypeElement("java.lang.String"));A more interesting case can be illustrated by the following example in which a method in type A does not override a like-named method in type B:class A { public void m() {} }

interface B { void m(); }

...

m1 = ...; // A.m

m2 = ...; // B.m

assert ! elements.overrides(m1, m2, elements.getTypeElement("A"));When viewed as a member of a third type C, however, the method in A does override the one in B:class C extends A implements B {}

...

assert elements.overrides(m1, m2, elements.getTypeElement("C"));

**Parameters:**overrider - the first method, possible overrideroverridden - the second method, possibly being overriddentype - the type of which the first method is a member **Returns:**true if and only if the first method overrides the second**See**  [**The Java Language Specification, Third Edition**](http://java.sun.com/docs/books/jls/)**:** 8.4.8 Inheritance, Overriding, and Hiding, 9.4.1 Inheritance and Overriding

### getConstantExpression

[String](http://docs.google.com/java/lang/String.html) **getConstantExpression**([Object](http://docs.google.com/java/lang/Object.html) value)

Returns the text of a *constant expression* representing a primitive value or a string. The text returned is in a form suitable for representing the value in source code.

**Parameters:**value - a primitive value or string **Returns:**the text of a constant expression **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if the argument is not a primitive value or string**See Also:**[VariableElement.getConstantValue()](http://docs.google.com/javax/lang/model/element/VariableElement.html#getConstantValue())

### printElements

void **printElements**([Writer](http://docs.google.com/java/io/Writer.html) w,  
 [Element](http://docs.google.com/javax/lang/model/element/Element.html)... elements)

Prints a representation of the elements to the given writer in the specified order. The main purpose of this method is for diagnostics. The exact format of the output is *not* specified and is subject to change.

**Parameters:**w - the writer to print the output toelements - the elements to print

### getName

[Name](http://docs.google.com/javax/lang/model/element/Name.html) **getName**([CharSequence](http://docs.google.com/java/lang/CharSequence.html) cs)

Return a name with the same sequence of characters as the argument.

**Parameters:**cs - the character sequence to return as a name

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Elements.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
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| [**PREV CLASS**](http://docs.google.com/javax/lang/model/util/ElementKindVisitor6.html)   [**NEXT CLASS**](http://docs.google.com/javax/lang/model/util/ElementScanner6.html) | [**FRAMES**](http://docs.google.com/index.html?javax/lang/model/util/Elements.html)    [**NO FRAMES**](http://docs.google.com/Elements.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#2et92p0) |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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