| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/TypeInfoProvider.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/xml/validation/SchemaFactoryLoader.html)   [**NEXT CLASS**](http://docs.google.com/javax/xml/validation/Validator.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/validation/TypeInfoProvider.html)    [**NO FRAMES**](http://docs.google.com/TypeInfoProvider.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#4d34og8) |

## **javax.xml.validation**

Class TypeInfoProvider

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.xml.validation.TypeInfoProvider**

public abstract class **TypeInfoProvider**extends [Object](http://docs.google.com/java/lang/Object.html)

This class provides access to the type information determined by [ValidatorHandler](http://docs.google.com/javax/xml/validation/ValidatorHandler.html).

Some schema languages, such as W3C XML Schema, encourages a validator to report the "type" it assigns to each attribute/element. Those applications who wish to access this type information can invoke methods defined on this "interface" to access such type information.

Implementation of this "interface" can be obtained through the [ValidatorHandler.getTypeInfoProvider()](http://docs.google.com/javax/xml/validation/ValidatorHandler.html#getTypeInfoProvider()) method.

**Since:** 1.5 **See Also:**[TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html)

| **Constructor Summary** | |
| --- | --- |
| protected | [**TypeInfoProvider**](http://docs.google.com/javax/xml/validation/TypeInfoProvider.html#TypeInfoProvider())()            Constructor for the derived class. |

| **Method Summary** | |
| --- | --- |
| abstract  [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) | [**getAttributeTypeInfo**](http://docs.google.com/javax/xml/validation/TypeInfoProvider.html#getAttributeTypeInfo(int))(int index)            Returns the immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object for the specified attribute of the current element. |
| abstract  [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) | [**getElementTypeInfo**](http://docs.google.com/javax/xml/validation/TypeInfoProvider.html#getElementTypeInfo())()            Returns the immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object for the current element. |
| abstract  boolean | [**isIdAttribute**](http://docs.google.com/javax/xml/validation/TypeInfoProvider.html#isIdAttribute(int))(int index)            Returns true if the specified attribute is determined to be ID. |
| abstract  boolean | [**isSpecified**](http://docs.google.com/javax/xml/validation/TypeInfoProvider.html#isSpecified(int))(int index)            Returns false if the attribute was added by the validator. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### TypeInfoProvider

protected **TypeInfoProvider**()

Constructor for the derived class.

The constructor does nothing.

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

### getElementTypeInfo

public abstract [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) **getElementTypeInfo**()

Returns the immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object for the current element.

The method may only be called by the startElement event or the endElement event of the [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) that the application sets to the [ValidatorHandler](http://docs.google.com/javax/xml/validation/ValidatorHandler.html).

When W3C XML Schema validation is being performed, in the case where an element has a union type, the [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) returned by a call to getElementTypeInfo() from the startElement event will be the union type. The TypeInfo returned by a call from the endElement event will be the actual member type used to validate the element.

**Returns:**An immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object that represents the type of the current element. Note that the caller can keep references to the obtained [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) longer than the callback scope. Otherwise, this method returns null if the validator is unable to determine the type of the current element for some reason (for example, if the validator is recovering from an earlier error.) **Throws:** [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - If this method is called from other [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) methods.

### getAttributeTypeInfo

public abstract [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) **getAttributeTypeInfo**(int index)

Returns the immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object for the specified attribute of the current element.

The method may only be called by the startElement event of the [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) that the application sets to the [ValidatorHandler](http://docs.google.com/javax/xml/validation/ValidatorHandler.html).

**Parameters:**index - The index of the attribute. The same index for the [Attributes](http://docs.google.com/org/xml/sax/Attributes.html) object passed to the startElement callback. **Returns:**An immutable [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) object that represents the type of the specified attribute. Note that the caller can keep references to the obtained [TypeInfo](http://docs.google.com/org/w3c/dom/TypeInfo.html) longer than the callback scope. Otherwise, this method returns null if the validator is unable to determine the type. **Throws:** [IndexOutOfBoundsException](http://docs.google.com/java/lang/IndexOutOfBoundsException.html) - If the index is invalid. [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - If this method is called from other [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) methods.

### isIdAttribute

public abstract boolean **isIdAttribute**(int index)

Returns true if the specified attribute is determined to be ID.

Exacly how an attribute is "determined to be ID" is up to the schema language. In case of W3C XML Schema, this means that the actual type of the attribute is the built-in ID type or its derived type.

A [DocumentBuilder](http://docs.google.com/javax/xml/parsers/DocumentBuilder.html) uses this information to properly implement [Attr.isId()](http://docs.google.com/org/w3c/dom/Attr.html#isId()).

The method may only be called by the startElement event of the [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) that the application sets to the [ValidatorHandler](http://docs.google.com/javax/xml/validation/ValidatorHandler.html).

**Parameters:**index - The index of the attribute. The same index for the [Attributes](http://docs.google.com/org/xml/sax/Attributes.html) object passed to the startElement callback. **Returns:**true if the type of the specified attribute is ID. **Throws:** [IndexOutOfBoundsException](http://docs.google.com/java/lang/IndexOutOfBoundsException.html) - If the index is invalid. [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - If this method is called from other [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) methods.

### isSpecified

public abstract boolean **isSpecified**(int index)

Returns false if the attribute was added by the validator.

This method provides information necessary for a [DocumentBuilder](http://docs.google.com/javax/xml/parsers/DocumentBuilder.html) to determine what the DOM tree should return from the [Attr.getSpecified()](http://docs.google.com/org/w3c/dom/Attr.html#getSpecified()) method.

The method may only be called by the startElement event of the [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) that the application sets to the [ValidatorHandler](http://docs.google.com/javax/xml/validation/ValidatorHandler.html).

A general guideline for validators is to return true if the attribute was originally present in the pipeline, and false if it was added by the validator.

**Parameters:**index - The index of the attribute. The same index for the [Attributes](http://docs.google.com/org/xml/sax/Attributes.html) object passed to the startElement callback. **Returns:**true if the attribute was present before the validator processes input. false if the attribute was added by the validator. **Throws:** [IndexOutOfBoundsException](http://docs.google.com/java/lang/IndexOutOfBoundsException.html) - If the index is invalid. [IllegalStateException](http://docs.google.com/java/lang/IllegalStateException.html) - If this method is called from other [ContentHandler](http://docs.google.com/org/xml/sax/ContentHandler.html) methods.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/TypeInfoProvider.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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[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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