| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/XPath.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   [**NEXT CLASS**](http://docs.google.com/javax/xml/xpath/XPathConstants.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/xpath/XPath.html)    [**NO FRAMES**](http://docs.google.com/XPath.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#2et92p0) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

## **javax.xml.xpath**

Interface XPath

public interface **XPath**

XPath provides access to the XPath evaluation environment and expressions.

| Evaluation of XPath Expressions. | |
| --- | --- |
| context | If a request is made to evaluate the expression in the absence of a context item, an empty document node will be used for the context. For the purposes of evaluating XPath expressions, a DocumentFragment is treated like a Document node. |
| variables | If the expression contains a variable reference, its value will be found through the [XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) set with [setXPathVariableResolver(XPathVariableResolver resolver)](http://docs.google.com/javax/xml/xpath/XPath.html#setXPathVariableResolver(javax.xml.xpath.XPathVariableResolver)). An [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) is raised if the variable resolver is undefined or the resolver returns null for the variable. The value of a variable must be immutable through the course of any single evaluation. |
| functions | If the expression contains a function reference, the function will be found through the [XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) set with [setXPathFunctionResolver(XPathFunctionResolver resolver)](http://docs.google.com/javax/xml/xpath/XPath.html#setXPathFunctionResolver(javax.xml.xpath.XPathFunctionResolver)). An [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) is raised if the function resolver is undefined or the function resolver returns null for the function. |
| QNames | QNames in the expression are resolved against the XPath namespace context set with [setNamespaceContext(NamespaceContext nsContext)](http://docs.google.com/javax/xml/xpath/XPath.html#setNamespaceContext(javax.xml.namespace.NamespaceContext)). |
| result | This result of evaluating an expression is converted to an instance of the desired return type. Valid return types are defined in [XPathConstants](http://docs.google.com/javax/xml/xpath/XPathConstants.html). Conversion to the return type follows XPath conversion rules. |

An XPath object is not thread-safe and not reentrant. In other words, it is the application's responsibility to make sure that one [XPath](http://docs.google.com/javax/xml/xpath/XPath.html) object is not used from more than one thread at any given time, and while the evaluate method is invoked, applications may not recursively call the evaluate method.

**Since:** 1.5 **See Also:**[XML Path Language (XPath) Version 1.0](http://www.w3.org/TR/xpath)

| **Method Summary** | |
| --- | --- |
| [XPathExpression](http://docs.google.com/javax/xml/xpath/XPathExpression.html) | [**compile**](http://docs.google.com/javax/xml/xpath/XPath.html#compile(java.lang.String))([String](http://docs.google.com/java/lang/String.html) expression)            Compile an XPath expression for later evaluation. |
| [String](http://docs.google.com/java/lang/String.html) | [**evaluate**](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20org.xml.sax.InputSource))([String](http://docs.google.com/java/lang/String.html) expression, [InputSource](http://docs.google.com/org/xml/sax/InputSource.html) source)            Evaluate an XPath expression in the context of the specified InputSource and return the result as a String. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**evaluate**](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20org.xml.sax.InputSource,%20javax.xml.namespace.QName))([String](http://docs.google.com/java/lang/String.html) expression, [InputSource](http://docs.google.com/org/xml/sax/InputSource.html) source, [QName](http://docs.google.com/javax/xml/namespace/QName.html) returnType)            Evaluate an XPath expression in the context of the specified InputSource and return the result as the specified type. |
| [String](http://docs.google.com/java/lang/String.html) | [**evaluate**](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20java.lang.Object))([String](http://docs.google.com/java/lang/String.html) expression, [Object](http://docs.google.com/java/lang/Object.html) item)            Evaluate an XPath expression in the specified context and return the result as a String. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**evaluate**](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20java.lang.Object,%20javax.xml.namespace.QName))([String](http://docs.google.com/java/lang/String.html) expression, [Object](http://docs.google.com/java/lang/Object.html) item, [QName](http://docs.google.com/javax/xml/namespace/QName.html) returnType)            Evaluate an XPath expression in the specified context and return the result as the specified type. |
| [NamespaceContext](http://docs.google.com/javax/xml/namespace/NamespaceContext.html) | [**getNamespaceContext**](http://docs.google.com/javax/xml/xpath/XPath.html#getNamespaceContext())()            Return the current namespace context. |
| [XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) | [**getXPathFunctionResolver**](http://docs.google.com/javax/xml/xpath/XPath.html#getXPathFunctionResolver())()            Return the current function resolver. |
| [XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) | [**getXPathVariableResolver**](http://docs.google.com/javax/xml/xpath/XPath.html#getXPathVariableResolver())()            Return the current variable resolver. |
| void | [**reset**](http://docs.google.com/javax/xml/xpath/XPath.html#reset())()            Reset this XPath to its original configuration. |
| void | [**setNamespaceContext**](http://docs.google.com/javax/xml/xpath/XPath.html#setNamespaceContext(javax.xml.namespace.NamespaceContext))([NamespaceContext](http://docs.google.com/javax/xml/namespace/NamespaceContext.html) nsContext)            Establish a namespace context. |
| void | [**setXPathFunctionResolver**](http://docs.google.com/javax/xml/xpath/XPath.html#setXPathFunctionResolver(javax.xml.xpath.XPathFunctionResolver))([XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) resolver)            Establish a function resolver. |
| void | [**setXPathVariableResolver**](http://docs.google.com/javax/xml/xpath/XPath.html#setXPathVariableResolver(javax.xml.xpath.XPathVariableResolver))([XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) resolver)            Establish a variable resolver. |

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

### reset

void **reset**()

Reset this XPath to its original configuration.

XPath is reset to the same state as when it was created with [XPathFactory.newXPath()](http://docs.google.com/javax/xml/xpath/XPathFactory.html#newXPath()). reset() is designed to allow the reuse of existing XPaths thus saving resources associated with the creation of new XPaths.

The reset XPath is not guaranteed to have the same [XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html), [XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) or [NamespaceContext](http://docs.google.com/javax/xml/namespace/NamespaceContext.html) Objects, e.g. [Object.equals(Object obj)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)). It is guaranteed to have a functionally equal XPathFunctionResolver, XPathVariableResolver and NamespaceContext.

### setXPathVariableResolver

void **setXPathVariableResolver**([XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) resolver)

Establish a variable resolver.

A NullPointerException is thrown if resolver is null.

**Parameters:**resolver - Variable resolver. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If resolver is null.

### getXPathVariableResolver

[XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) **getXPathVariableResolver**()

Return the current variable resolver.

null is returned in no variable resolver is in effect.

**Returns:**Current variable resolver.

### setXPathFunctionResolver

void **setXPathFunctionResolver**([XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) resolver)

Establish a function resolver.

A NullPointerException is thrown if resolver is null.

**Parameters:**resolver - XPath function resolver. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If resolver is null.

### getXPathFunctionResolver

[XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html) **getXPathFunctionResolver**()

Return the current function resolver.

null is returned in no function resolver is in effect.

**Returns:**Current function resolver.

### setNamespaceContext

void **setNamespaceContext**([NamespaceContext](http://docs.google.com/javax/xml/namespace/NamespaceContext.html) nsContext)

Establish a namespace context.

A NullPointerException is thrown if nsContext is null.

**Parameters:**nsContext - Namespace context to use. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If nsContext is null.

### getNamespaceContext

[NamespaceContext](http://docs.google.com/javax/xml/namespace/NamespaceContext.html) **getNamespaceContext**()

Return the current namespace context.

null is returned in no namespace context is in effect.

**Returns:**Current Namespace context.

### compile

[XPathExpression](http://docs.google.com/javax/xml/xpath/XPathExpression.html) **compile**([String](http://docs.google.com/java/lang/String.html) expression)  
 throws [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html)

Compile an XPath expression for later evaluation.

If expression contains any [XPathFunction](http://docs.google.com/javax/xml/xpath/XPathFunction.html)s, they must be available via the [XPathFunctionResolver](http://docs.google.com/javax/xml/xpath/XPathFunctionResolver.html). An [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) will be thrown if the XPathFunction cannot be resovled with the XPathFunctionResolver.

If expression contains any variables, the [XPathVariableResolver](http://docs.google.com/javax/xml/xpath/XPathVariableResolver.html) in effect **at compile time** will be used to resolve them.

If expression is null, a NullPointerException is thrown.

**Parameters:**expression - The XPath expression. **Returns:**Compiled XPath expression. **Throws:** [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) - If expression cannot be compiled. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If expression is null.

### evaluate

[Object](http://docs.google.com/java/lang/Object.html) **evaluate**([String](http://docs.google.com/java/lang/String.html) expression,  
 [Object](http://docs.google.com/java/lang/Object.html) item,  
 [QName](http://docs.google.com/javax/xml/namespace/QName.html) returnType)  
 throws [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html)

Evaluate an XPath expression in the specified context and return the result as the specified type.

See [Evaluation of XPath Expressions](#3znysh7) for context item evaluation, variable, function and QName resolution and return type conversion.

If returnType is not one of the types defined in [XPathConstants](http://docs.google.com/javax/xml/xpath/XPathConstants.html) ( [NUMBER](http://docs.google.com/javax/xml/xpath/XPathConstants.html#NUMBER), [STRING](http://docs.google.com/javax/xml/xpath/XPathConstants.html#STRING), [BOOLEAN](http://docs.google.com/javax/xml/xpath/XPathConstants.html#BOOLEAN), [NODE](http://docs.google.com/javax/xml/xpath/XPathConstants.html#NODE) or [NODESET](http://docs.google.com/javax/xml/xpath/XPathConstants.html#NODESET)) then an IllegalArgumentException is thrown.

If a null value is provided for item, an empty document will be used for the context. If expression or returnType is null, then a NullPointerException is thrown.

**Parameters:**expression - The XPath expression.item - The starting context (a node, for example).returnType - The desired return type. **Returns:**Result of evaluating an XPath expression as an Object of returnType. **Throws:** [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) - If expression cannot be evaluated. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - If returnType is not one of the types defined in [XPathConstants](http://docs.google.com/javax/xml/xpath/XPathConstants.html). [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If expression or returnType is null.

### evaluate

[String](http://docs.google.com/java/lang/String.html) **evaluate**([String](http://docs.google.com/java/lang/String.html) expression,  
 [Object](http://docs.google.com/java/lang/Object.html) item)  
 throws [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html)

Evaluate an XPath expression in the specified context and return the result as a String.

This method calls [evaluate(String expression, Object item, QName returnType)](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20java.lang.Object,%20javax.xml.namespace.QName)) with a returnType of [XPathConstants.STRING](http://docs.google.com/javax/xml/xpath/XPathConstants.html#STRING).

See [Evaluation of XPath Expressions](#3znysh7) for context item evaluation, variable, function and QName resolution and return type conversion.

If a null value is provided for item, an empty document will be used for the context. If expression is null, then a NullPointerException is thrown.

**Parameters:**expression - The XPath expression.item - The starting context (a node, for example). **Returns:**The String that is the result of evaluating the expression and converting the result to a String. **Throws:** [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) - If expression cannot be evaluated. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If expression is null.

### evaluate

[Object](http://docs.google.com/java/lang/Object.html) **evaluate**([String](http://docs.google.com/java/lang/String.html) expression,  
 [InputSource](http://docs.google.com/org/xml/sax/InputSource.html) source,  
 [QName](http://docs.google.com/javax/xml/namespace/QName.html) returnType)  
 throws [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html)

Evaluate an XPath expression in the context of the specified InputSource and return the result as the specified type.

This method builds a data model for the [InputSource](http://docs.google.com/org/xml/sax/InputSource.html) and calls [evaluate(String expression, Object item, QName returnType)](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20java.lang.Object,%20javax.xml.namespace.QName)) on the resulting document object.

See [Evaluation of XPath Expressions](#3znysh7) for context item evaluation, variable, function and QName resolution and return type conversion.

If returnType is not one of the types defined in [XPathConstants](http://docs.google.com/javax/xml/xpath/XPathConstants.html), then an IllegalArgumentException is thrown.

If expression, source or returnType is null, then a NullPointerException is thrown.

**Parameters:**expression - The XPath expression.source - The input source of the document to evaluate over.returnType - The desired return type. **Returns:**The Object that encapsulates the result of evaluating the expression. **Throws:** [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) - If expression cannot be evaluated. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - If returnType is not one of the types defined in [XPathConstants](http://docs.google.com/javax/xml/xpath/XPathConstants.html). [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If expression, source or returnType is null.

### evaluate

[String](http://docs.google.com/java/lang/String.html) **evaluate**([String](http://docs.google.com/java/lang/String.html) expression,  
 [InputSource](http://docs.google.com/org/xml/sax/InputSource.html) source)  
 throws [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html)

Evaluate an XPath expression in the context of the specified InputSource and return the result as a String.

This method calls [evaluate(String expression, InputSource source, QName returnType)](http://docs.google.com/javax/xml/xpath/XPath.html#evaluate(java.lang.String,%20org.xml.sax.InputSource,%20javax.xml.namespace.QName)) with a returnType of [XPathConstants.STRING](http://docs.google.com/javax/xml/xpath/XPathConstants.html#STRING).

See [Evaluation of XPath Expressions](#3znysh7) for context item evaluation, variable, function and QName resolution and return type conversion.

If expression or source is null, then a NullPointerException is thrown.

**Parameters:**expression - The XPath expression.source - The InputSource of the document to evaluate over. **Returns:**The String that is the result of evaluating the expression and converting the result to a String. **Throws:** [XPathExpressionException](http://docs.google.com/javax/xml/xpath/XPathExpressionException.html) - If expression cannot be evaluated. [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - If expression or source is null.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/XPath.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   [**NEXT CLASS**](http://docs.google.com/javax/xml/xpath/XPathConstants.html) | [**FRAMES**](http://docs.google.com/index.html?javax/xml/xpath/XPath.html)    [**NO FRAMES**](http://docs.google.com/XPath.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#2et92p0) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

[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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