| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OpenType.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/management/openmbean/OpenMBeanParameterInfoSupport.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/openmbean/SimpleType.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/openmbean/OpenType.html)    [**NO FRAMES**](http://docs.google.com/OpenType.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#17dp8vu) | [METHOD](#26in1rg) |

## **javax.management.openmbean**

Class OpenType<T>

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.management.openmbean.OpenType<T>**

**Type Parameters:**T - the Java type that instances described by this type must have. For example, [SimpleType.INTEGER](http://docs.google.com/javax/management/openmbean/SimpleType.html#INTEGER) is a SimpleType<Integer> which is a subclass of OpenType<Integer>, meaning that an attribute, parameter, or return value that is described as a SimpleType.INTEGER must have Java type [Integer](http://docs.google.com/java/lang/Integer.html). **All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html) **Direct Known Subclasses:** [ArrayType](http://docs.google.com/javax/management/openmbean/ArrayType.html), [CompositeType](http://docs.google.com/javax/management/openmbean/CompositeType.html), [SimpleType](http://docs.google.com/javax/management/openmbean/SimpleType.html), [TabularType](http://docs.google.com/javax/management/openmbean/TabularType.html)

public abstract class **OpenType<T>**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Serializable](http://docs.google.com/java/io/Serializable.html)

The OpenType class is the parent abstract class of all classes which describe the actual *open type* of open data values.

An *open type* is defined by:

* the fully qualified Java class name of the open data values this type describes; note that only a limited set of Java classes is allowed for open data values (see [ALLOWED\_CLASSNAMES\_LIST](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST)),
* its name,
* its description.

**Since:** 1.5 **See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#javax.management.openmbean.OpenType)

| **Field Summary** | |
| --- | --- |
| static [String](http://docs.google.com/java/lang/String.html)[] | [**ALLOWED\_CLASSNAMES**](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES)  **Deprecated.** *Use* [*ALLOWED\_CLASSNAMES\_LIST*](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST) *instead.* |
| static [List](http://docs.google.com/java/util/List.html)<[String](http://docs.google.com/java/lang/String.html)> | [**ALLOWED\_CLASSNAMES\_LIST**](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST)            List of the fully qualified names of the Java classes allowed for open data values. |

| **Constructor Summary** | |
| --- | --- |
| protected | [**OpenType**](http://docs.google.com/javax/management/openmbean/OpenType.html#OpenType(java.lang.String,%20java.lang.String,%20java.lang.String))([String](http://docs.google.com/java/lang/String.html) className, [String](http://docs.google.com/java/lang/String.html) typeName, [String](http://docs.google.com/java/lang/String.html) description)            Constructs an OpenType instance (actually a subclass instance as OpenType is abstract), checking for the validity of the given parameters. |

| **Method Summary** | |
| --- | --- |
| abstract  boolean | [**equals**](http://docs.google.com/javax/management/openmbean/OpenType.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) obj)            Compares the specified obj parameter with this open type instance for equality. |
| [String](http://docs.google.com/java/lang/String.html) | [**getClassName**](http://docs.google.com/javax/management/openmbean/OpenType.html#getClassName())()            Returns the fully qualified Java class name of the open data values this open type describes. |
| [String](http://docs.google.com/java/lang/String.html) | [**getDescription**](http://docs.google.com/javax/management/openmbean/OpenType.html#getDescription())()            Returns the text description of this OpenType instance. |
| [String](http://docs.google.com/java/lang/String.html) | [**getTypeName**](http://docs.google.com/javax/management/openmbean/OpenType.html#getTypeName())()            Returns the name of this OpenType instance. |
| abstract  int | [**hashCode**](http://docs.google.com/javax/management/openmbean/OpenType.html#hashCode())()            Returns a hash code value for the object. |
| boolean | [**isArray**](http://docs.google.com/javax/management/openmbean/OpenType.html#isArray())()            Returns true if the open data values this open type describes are arrays, false otherwise. |
| abstract  boolean | [**isValue**](http://docs.google.com/javax/management/openmbean/OpenType.html#isValue(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) obj)            Tests whether obj is a value for this open type. |
| abstract  [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/javax/management/openmbean/OpenType.html#toString())()            Returns a string representation of this open type instance. |

| **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()), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [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)) |

| **Field Detail** |
| --- |

### ALLOWED\_CLASSNAMES\_LIST

public static final [List](http://docs.google.com/java/util/List.html)<[String](http://docs.google.com/java/lang/String.html)> **ALLOWED\_CLASSNAMES\_LIST**

List of the fully qualified names of the Java classes allowed for open data values. A multidimensional array of any one of these classes or their corresponding primitive types is also an allowed class for open data values.

ALLOWED\_CLASSNAMES\_LIST = {  
 "java.lang.Void",  
 "java.lang.Boolean",  
 "java.lang.Character",  
 "java.lang.Byte",  
 "java.lang.Short",  
 "java.lang.Integer",  
 "java.lang.Long",  
 "java.lang.Float",  
 "java.lang.Double",  
 "java.lang.String",  
 "java.math.BigDecimal",  
 "java.math.BigInteger",  
 "java.util.Date",  
 "javax.management.ObjectName",  
 CompositeData.class.getName(),  
 TabularData.class.getName() } ;

### ALLOWED\_CLASSNAMES

[@Deprecated](http://docs.google.com/java/lang/Deprecated.html)  
public static final [String](http://docs.google.com/java/lang/String.html)[] **ALLOWED\_CLASSNAMES**

**Deprecated.** *Use* [*ALLOWED\_CLASSNAMES\_LIST*](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST) *instead.*

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

### OpenType

protected **OpenType**([String](http://docs.google.com/java/lang/String.html) className,  
 [String](http://docs.google.com/java/lang/String.html) typeName,  
 [String](http://docs.google.com/java/lang/String.html) description)  
 throws [OpenDataException](http://docs.google.com/javax/management/openmbean/OpenDataException.html)

Constructs an OpenType instance (actually a subclass instance as OpenType is abstract), checking for the validity of the given parameters. The validity constraints are described below for each parameter.

**Parameters:**className - The fully qualified Java class name of the open data values this open type describes. The valid Java class names allowed for open data values are listed in [ALLOWED\_CLASSNAMES\_LIST](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST). A multidimensional array of any one of these classes or their corresponding primitive types is also an allowed class, in which case the class name follows the rules defined by the method [getName()](http://docs.google.com/java/lang/Class.html#getName()) of java.lang.Class. For example, a 3-dimensional array of Strings has for class name "[[[Ljava.lang.String;" (without the quotes).

 typeName - The name given to the open type this instance represents; cannot be a null or empty string.

 description - The human readable description of the open type this instance represents; cannot be a null or empty string.

**Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if className, typeName or description is a null or empty string

[OpenDataException](http://docs.google.com/javax/management/openmbean/OpenDataException.html) - if className is not one of the allowed Java class names for open data

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

### getClassName

public [String](http://docs.google.com/java/lang/String.html) **getClassName**()

Returns the fully qualified Java class name of the open data values this open type describes. The only possible Java class names for open data values are listed in [ALLOWED\_CLASSNAMES\_LIST](http://docs.google.com/javax/management/openmbean/OpenType.html#ALLOWED_CLASSNAMES_LIST). A multidimensional array of any one of these classes or their corresponding primitive types is also an allowed class, in which case the class name follows the rules defined by the method [getName()](http://docs.google.com/java/lang/Class.html#getName()) of java.lang.Class. For example, a 3-dimensional array of Strings has for class name "[[[Ljava.lang.String;" (without the quotes), a 3-dimensional array of Integers has for class name "[[[Ljava.lang.Integer;" (without the quotes), and a 3-dimensional array of int has for class name "[[[I" (without the quotes)

**Returns:**the class name.

### getTypeName

public [String](http://docs.google.com/java/lang/String.html) **getTypeName**()

Returns the name of this OpenType instance.

**Returns:**the type name.

### getDescription

public [String](http://docs.google.com/java/lang/String.html) **getDescription**()

Returns the text description of this OpenType instance.

**Returns:**the description.

### isArray

public boolean **isArray**()

Returns true if the open data values this open type describes are arrays, false otherwise.

**Returns:**true if this is an array type.

### isValue

public abstract boolean **isValue**([Object](http://docs.google.com/java/lang/Object.html) obj)

Tests whether obj is a value for this open type.

**Parameters:**obj - the object to be tested for validity. **Returns:**true if obj is a value for this open type, false otherwise.

### equals

public abstract boolean **equals**([Object](http://docs.google.com/java/lang/Object.html) obj)

Compares the specified obj parameter with this open type instance for equality.

**Overrides:**[equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) in class [Object](http://docs.google.com/java/lang/Object.html) **Parameters:**obj - the object to compare to. **Returns:**true if this object and obj are equal.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### hashCode

public abstract int **hashCode**()

**Description copied from class:** [**Object**](http://docs.google.com/java/lang/Object.html#hashCode()) Returns a hash code value for the object. This method is supported for the benefit of hashtables such as those provided by java.util.Hashtable.

The general contract of hashCode is:

* Whenever it is invoked on the same object more than once during an execution of a Java application, the hashCode method must consistently return the same integer, provided no information used in equals comparisons on the object is modified. This integer need not remain consistent from one execution of an application to another execution of the same application.
* If two objects are equal according to the equals(Object) method, then calling the hashCode method on each of the two objects must produce the same integer result.
* It is *not* required that if two objects are unequal according to the [Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) method, then calling the hashCode method on each of the two objects must produce distinct integer results. However, the programmer should be aware that producing distinct integer results for unequal objects may improve the performance of hashtables.

As much as is reasonably practical, the hashCode method defined by class Object does return distinct integers for distinct objects. (This is typically implemented by converting the internal address of the object into an integer, but this implementation technique is not required by the JavaTM programming language.)

**Overrides:**[hashCode](http://docs.google.com/java/lang/Object.html#hashCode()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a hash code value for this object.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### toString

public abstract [String](http://docs.google.com/java/lang/String.html) **toString**()

Returns a string representation of this open type instance.

**Overrides:**[toString](http://docs.google.com/java/lang/Object.html#toString()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the string representation.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/OpenType.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/management/openmbean/OpenMBeanParameterInfoSupport.html)   [**NEXT CLASS**](http://docs.google.com/javax/management/openmbean/SimpleType.html) | [**FRAMES**](http://docs.google.com/index.html?javax/management/openmbean/OpenType.html)    [**NO FRAMES**](http://docs.google.com/OpenType.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
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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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