| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/AttributeSetUtilities.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/print/attribute/AttributeSet.html)   [**NEXT CLASS**](http://docs.google.com/javax/print/attribute/DateTimeSyntax.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/AttributeSetUtilities.html)    [**NO FRAMES**](http://docs.google.com/AttributeSetUtilities.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

## **javax.print.attribute**

Class AttributeSetUtilities

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.print.attribute.AttributeSetUtilities**

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

Class AttributeSetUtilities provides static methods for manipulating AttributeSets.

* Methods for creating unmodifiable and synchronized views of attribute sets.
* operations useful for building implementations of interface [AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html)

An **unmodifiable view** *U* of an AttributeSet *S* provides a client with "read-only" access to *S*. Query operations on *U* "read through" to *S*; thus, changes in *S* are reflected in *U*. However, any attempt to modify *U*, results in an UnmodifiableSetException. The unmodifiable view object *U* will be serializable if the attribute set object *S* is serializable.

A **synchronized view** *V* of an attribute set *S* provides a client with synchronized (multiple thread safe) access to *S*. Each operation of *V* is synchronized using *V* itself as the lock object and then merely invokes the corresponding operation of *S*. In order to guarantee mutually exclusive access, it is critical that all access to *S* is accomplished through *V*. The synchronized view object *V* will be serializable if the attribute set object *S* is serializable.

As mentioned in the package description of javax.print, a null reference parameter to methods is incorrect unless explicitly documented on the method as having a meaningful interpretation. Usage to the contrary is incorrect coding and may result in a run time exception either immediately or at some later time. IllegalArgumentException and NullPointerException are examples of typical and acceptable run time exceptions for such cases.

| **Method Summary** | |
| --- | --- |
| static [AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) | [**synchronizedView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#synchronizedView(javax.print.attribute.AttributeSet))([AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) attributeSet)            Creates a synchronized view of the given attribute set. |
| static [DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) | [**synchronizedView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#synchronizedView(javax.print.attribute.DocAttributeSet))([DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) attributeSet)            Creates a synchronized view of the given doc attribute set. |
| static [PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) | [**synchronizedView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#synchronizedView(javax.print.attribute.PrintJobAttributeSet))([PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) attributeSet)            Creates a synchronized view of the given print job attribute set. |
| static [PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) | [**synchronizedView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#synchronizedView(javax.print.attribute.PrintRequestAttributeSet))([PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) attributeSet)            Creates a synchronized view of the given print request attribute set. |
| static [PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) | [**synchronizedView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#synchronizedView(javax.print.attribute.PrintServiceAttributeSet))([PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) attributeSet)            Creates a synchronized view of the given print service attribute set. |
| static [AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) | [**unmodifiableView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#unmodifiableView(javax.print.attribute.AttributeSet))([AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) attributeSet)            Creates an unmodifiable view of the given attribute set. |
| static [DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) | [**unmodifiableView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#unmodifiableView(javax.print.attribute.DocAttributeSet))([DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) attributeSet)            Creates an unmodifiable view of the given doc attribute set. |
| static [PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) | [**unmodifiableView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#unmodifiableView(javax.print.attribute.PrintJobAttributeSet))([PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) attributeSet)            Creates an unmodifiable view of the given print job attribute set. |
| static [PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) | [**unmodifiableView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#unmodifiableView(javax.print.attribute.PrintRequestAttributeSet))([PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) attributeSet)            Creates an unmodifiable view of the given print request attribute set. |
| static [PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) | [**unmodifiableView**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#unmodifiableView(javax.print.attribute.PrintServiceAttributeSet))([PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) attributeSet)            Creates an unmodifiable view of the given print service attribute set. |
| static [Class](http://docs.google.com/java/lang/Class.html)<?> | [**verifyAttributeCategory**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#verifyAttributeCategory(java.lang.Object,%20java.lang.Class))([Object](http://docs.google.com/java/lang/Object.html) object, [Class](http://docs.google.com/java/lang/Class.html)<?> interfaceName)            Verify that the given object is a [Class](http://docs.google.com/java/lang/Class.html) that implements the given interface, which is assumed to be interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) or a subinterface thereof. |
| static [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) | [**verifyAttributeValue**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#verifyAttributeValue(java.lang.Object,%20java.lang.Class))([Object](http://docs.google.com/java/lang/Object.html) object, [Class](http://docs.google.com/java/lang/Class.html)<?> interfaceName)            Verify that the given object is an instance of the given interface, which is assumed to be interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) or a subinterface thereof. |
| static void | [**verifyCategoryForValue**](http://docs.google.com/javax/print/attribute/AttributeSetUtilities.html#verifyCategoryForValue(java.lang.Class,%20javax.print.attribute.Attribute))([Class](http://docs.google.com/java/lang/Class.html)<?> category, [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) attribute)            Verify that the given attribute category object is equal to the category of the given attribute value object. |

| **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)) |

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

### unmodifiableView

public static [AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) **unmodifiableView**([AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) attributeSet)

Creates an unmodifiable view of the given attribute set.

**Parameters:**attributeSet - Underlying attribute set. **Returns:**Unmodifiable view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null. Null is never a

### unmodifiableView

public static [DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) **unmodifiableView**([DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) attributeSet)

Creates an unmodifiable view of the given doc attribute set.

**Parameters:**attributeSet - Underlying doc attribute set. **Returns:**Unmodifiable view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### unmodifiableView

public static [PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) **unmodifiableView**([PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) attributeSet)

Creates an unmodifiable view of the given print request attribute set.

**Parameters:**attributeSet - Underlying print request attribute set. **Returns:**Unmodifiable view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### unmodifiableView

public static [PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) **unmodifiableView**([PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) attributeSet)

Creates an unmodifiable view of the given print job attribute set.

**Parameters:**attributeSet - Underlying print job attribute set. **Returns:**Unmodifiable view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### unmodifiableView

public static [PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) **unmodifiableView**([PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) attributeSet)

Creates an unmodifiable view of the given print service attribute set.

**Parameters:**attributeSet - Underlying print service attribute set. **Returns:**Unmodifiable view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### synchronizedView

public static [AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) **synchronizedView**([AttributeSet](http://docs.google.com/javax/print/attribute/AttributeSet.html) attributeSet)

Creates a synchronized view of the given attribute set.

**Parameters:**attributeSet - Underlying attribute set. **Returns:**Synchronized view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### synchronizedView

public static [DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) **synchronizedView**([DocAttributeSet](http://docs.google.com/javax/print/attribute/DocAttributeSet.html) attributeSet)

Creates a synchronized view of the given doc attribute set.

**Parameters:**attributeSet - Underlying doc attribute set. **Returns:**Synchronized view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### synchronizedView

public static [PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) **synchronizedView**([PrintRequestAttributeSet](http://docs.google.com/javax/print/attribute/PrintRequestAttributeSet.html) attributeSet)

Creates a synchronized view of the given print request attribute set.

**Parameters:**attributeSet - Underlying print request attribute set. **Returns:**Synchronized view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### synchronizedView

public static [PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) **synchronizedView**([PrintJobAttributeSet](http://docs.google.com/javax/print/attribute/PrintJobAttributeSet.html) attributeSet)

Creates a synchronized view of the given print job attribute set.

**Parameters:**attributeSet - Underlying print job attribute set. **Returns:**Synchronized view of attributeSet. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - Thrown if attributeSet is null.

### synchronizedView

public static [PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) **synchronizedView**([PrintServiceAttributeSet](http://docs.google.com/javax/print/attribute/PrintServiceAttributeSet.html) attributeSet)

Creates a synchronized view of the given print service attribute set.

**Parameters:**attributeSet - Underlying print service attribute set. **Returns:**Synchronized view of attributeSet.

### verifyAttributeCategory

public static [Class](http://docs.google.com/java/lang/Class.html)<?> **verifyAttributeCategory**([Object](http://docs.google.com/java/lang/Object.html) object,  
 [Class](http://docs.google.com/java/lang/Class.html)<?> interfaceName)

Verify that the given object is a [Class](http://docs.google.com/java/lang/Class.html) that implements the given interface, which is assumed to be interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) or a subinterface thereof.

**Parameters:**object - Object to test.interfaceName - Interface the object must implement. **Returns:**If object is a [Class](http://docs.google.com/java/lang/Class.html) that implements interfaceName, object is returned downcast to type [Class](http://docs.google.com/java/lang/Class.html); otherwise an exception is thrown. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - (unchecked exception) Thrown if object is null. [ClassCastException](http://docs.google.com/java/lang/ClassCastException.html) - (unchecked exception) Thrown if object is not a [Class](http://docs.google.com/java/lang/Class.html) that implements interfaceName.

### verifyAttributeValue

public static [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) **verifyAttributeValue**([Object](http://docs.google.com/java/lang/Object.html) object,  
 [Class](http://docs.google.com/java/lang/Class.html)<?> interfaceName)

Verify that the given object is an instance of the given interface, which is assumed to be interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) or a subinterface thereof.

**Parameters:**object - Object to test.interfaceName - Interface of which the object must be an instance. **Returns:**If object is an instance of interfaceName, object is returned downcast to type [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html); otherwise an exception is thrown. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - (unchecked exception) Thrown if object is null. [ClassCastException](http://docs.google.com/java/lang/ClassCastException.html) - (unchecked exception) Thrown if object is not an instance of interfaceName.

### verifyCategoryForValue

public static void **verifyCategoryForValue**([Class](http://docs.google.com/java/lang/Class.html)<?> category,  
 [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) attribute)

Verify that the given attribute category object is equal to the category of the given attribute value object. If so, this method returns doing nothing. If not, this method throws an exception.

**Parameters:**category - Attribute category to test.attribute - Attribute value to test. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - (unchecked exception) Thrown if the category is null or if the attribute is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - (unchecked exception) Thrown if the category is not equal to the category of the attribute.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/AttributeSetUtilities.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/print/attribute/AttributeSet.html)   [**NEXT CLASS**](http://docs.google.com/javax/print/attribute/DateTimeSyntax.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/AttributeSetUtilities.html)    [**NO FRAMES**](http://docs.google.com/AttributeSetUtilities.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | 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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