| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/PageRanges.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/standard/OutputDeviceAssigned.html)   [**NEXT CLASS**](http://docs.google.com/javax/print/attribute/standard/PagesPerMinute.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/PageRanges.html)    [**NO FRAMES**](http://docs.google.com/PageRanges.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#26in1rg) |

## **javax.print.attribute.standard**

Class PageRanges

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

**All Implemented Interfaces:** [Serializable](http://docs.google.com/java/io/Serializable.html), [Cloneable](http://docs.google.com/java/lang/Cloneable.html), [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html), [DocAttribute](http://docs.google.com/javax/print/attribute/DocAttribute.html), [PrintJobAttribute](http://docs.google.com/javax/print/attribute/PrintJobAttribute.html), [PrintRequestAttribute](http://docs.google.com/javax/print/attribute/PrintRequestAttribute.html)

public final class **PageRanges**extends [SetOfIntegerSyntax](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html)implements [DocAttribute](http://docs.google.com/javax/print/attribute/DocAttribute.html), [PrintRequestAttribute](http://docs.google.com/javax/print/attribute/PrintRequestAttribute.html), [PrintJobAttribute](http://docs.google.com/javax/print/attribute/PrintJobAttribute.html)

Class PageRanges is a printing attribute class, a set of integers, that identifies the range(s) of print-stream pages that the Printer object uses for each copy of each document which are to be printed. Nothing is printed for any pages identified that do not exist in the document(s). The attribute is associated with *print-stream* pages, not application-numbered pages (for example, the page numbers found in the headers and or footers for certain word processing applications).

In most cases, the exact pages to be printed will be generated by a device driver and this attribute would not be required. However, when printing an archived document which has already been formatted, the end user may elect to print just a subset of the pages contained in the document. In this case, if a page range of "*n*-*m*" is specified, the first page to be printed will be page *n.* All subsequent pages of the document will be printed through and including page *m.*

If a PageRanges attribute is not specified for a print job, all pages of the document will be printed. In other words, the default value for the PageRanges attribute is always {{1, Integer.MAX\_VALUE}}.

The effect of a PageRanges attribute on a multidoc print job (a job with multiple documents) depends on whether all the docs have the same page ranges specified or whether different docs have different page ranges specified, and on the (perhaps defaulted) value of the [MultipleDocumentHandling](http://docs.google.com/javax/print/attribute/standard/MultipleDocumentHandling.html) attribute.

* If all the docs have the same page ranges specified, then any value of [MultipleDocumentHandling](http://docs.google.com/javax/print/attribute/standard/MultipleDocumentHandling.html) makes sense, and the printer's processing depends on the [MultipleDocumentHandling](http://docs.google.com/javax/print/attribute/standard/MultipleDocumentHandling.html) value:
  + SINGLE\_DOCUMENT -- All the input docs will be combined together into one output document. The specified page ranges of that output document will be printed.
  + SINGLE\_DOCUMENT\_NEW\_SHEET -- All the input docs will be combined together into one output document, and the first impression of each input doc will always start on a new media sheet. The specified page ranges of that output document will be printed.
  + SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES -- For each separate input doc, the specified page ranges will be printed.
  + SEPARATE\_DOCUMENTS\_COLLATED\_COPIES -- For each separate input doc, the specified page ranges will be printed.
  + SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES -- For each separate input doc, its own specified page ranges will be printed..
  + SEPARATE\_DOCUMENTS\_COLLATED\_COPIES -- For each separate input doc, its own specified page ranges will be printed..

**IPP Compatibility:** The PageRanges attribute's canonical array form gives the lower and upper bound for each range of pages to be included in and IPP "page-ranges" attribute. See class [SetOfIntegerSyntax](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html) for an explanation of canonical array form. The category name returned by getName() gives the IPP attribute name.

**See Also:**[Serialized Form](http://docs.google.com/serialized-form.html#javax.print.attribute.standard.PageRanges)

| **Constructor Summary** | |
| --- | --- |
| [**PageRanges**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#PageRanges(int))(int member)            Construct a new page ranges attribute containing a single integer. |
| [**PageRanges**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#PageRanges(int%5B%5D%5B%5D))(int[][] members)            Construct a new page ranges attribute with the given members. |
| [**PageRanges**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#PageRanges(int,%20int))(int lowerBound, int upperBound)            Construct a new page ranges attribute containing a single range of integers. |
| [**PageRanges**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#PageRanges(java.lang.String))([String](http://docs.google.com/java/lang/String.html) members)            Construct a new page ranges attribute with the given members in string form. |

| **Method Summary** | |
| --- | --- |
| boolean | [**equals**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) object)            Returns whether this page ranges attribute is equivalent to the passed in object. |
| [Class](http://docs.google.com/java/lang/Class.html)<? extends [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html)> | [**getCategory**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#getCategory())()            Get the printing attribute class which is to be used as the "category" for this printing attribute value. |
| [String](http://docs.google.com/java/lang/String.html) | [**getName**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html#getName())()            Get the name of the category of which this attribute value is an instance. |

| **Methods inherited from class javax.print.attribute.**[**SetOfIntegerSyntax**](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html) |
| --- |
| [contains](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#contains(int)), [contains](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#contains(javax.print.attribute.IntegerSyntax)), [getMembers](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#getMembers()), [hashCode](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#hashCode()), [next](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#next(int)), [toString](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#toString()) |

| **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)) |

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

### PageRanges

public **PageRanges**(int[][] members)

Construct a new page ranges attribute with the given members. The members are specified in "array form;" see class [SetOfIntegerSyntax](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html) for an explanation of array form.

**Parameters:**members - Set members in array form. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - (unchecked exception) Thrown if members is null or any element of members is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - (unchecked exception) Thrown if any element of members is not a length-one or length-two array. Also thrown if members is a zero-length array or if any member of the set is less than 1.

### PageRanges

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

Construct a new page ranges attribute with the given members in string form. See class [SetOfIntegerSyntax](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html) for explanation of the syntax.

**Parameters:**members - Set members in string form. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - (unchecked exception) Thrown if members is null or any element of members is null. [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - (Unchecked exception) Thrown if members does not obey the proper syntax. Also thrown if the constructed set-of-integer is a zero-length array or if any member of the set is less than 1.

### PageRanges

public **PageRanges**(int member)

Construct a new page ranges attribute containing a single integer. That is, only the one page is to be printed.

**Parameters:**member - Set member. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - (Unchecked exception) Thrown if member is less than 1.

### PageRanges

public **PageRanges**(int lowerBound,  
 int upperBound)

Construct a new page ranges attribute containing a single range of integers. That is, only those pages in the one range are to be printed.

**Parameters:**lowerBound - Lower bound of the range.upperBound - Upper bound of the range. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - (Unchecked exception) Thrown if a null range is specified or if a non-null range is specified with lowerBound less than 1.

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

### equals

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

Returns whether this page ranges attribute is equivalent to the passed in object. To be equivalent, all of the following conditions must be true:

1. object is not null.
2. object is an instance of class PageRanges.
3. This page ranges attribute's members and object's members are the same.

**Overrides:**[equals](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html#equals(java.lang.Object)) in class [SetOfIntegerSyntax](http://docs.google.com/javax/print/attribute/SetOfIntegerSyntax.html) **Parameters:**object - Object to compare to. **Returns:**True if object is equivalent to this page ranges attribute, false otherwise.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### getCategory

public final [Class](http://docs.google.com/java/lang/Class.html)<? extends [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html)> **getCategory**()

Get the printing attribute class which is to be used as the "category" for this printing attribute value.

For class PageRanges, the category is class PageRanges itself.

**Specified by:**[getCategory](http://docs.google.com/javax/print/attribute/Attribute.html#getCategory()) in interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) **Returns:**Printing attribute class (category), an instance of class [java.lang.Class](http://docs.google.com/java/lang/Class.html).

### getName

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

Get the name of the category of which this attribute value is an instance.

For class PageRanges, the category name is "page-ranges".

**Specified by:**[getName](http://docs.google.com/javax/print/attribute/Attribute.html#getName()) in interface [Attribute](http://docs.google.com/javax/print/attribute/Attribute.html) **Returns:**Attribute category 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/PageRanges.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/standard/OutputDeviceAssigned.html)   [**NEXT CLASS**](http://docs.google.com/javax/print/attribute/standard/PagesPerMinute.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/PageRanges.html)    [**NO FRAMES**](http://docs.google.com/PageRanges.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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