| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/JobAttributes.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/java/awt/ItemSelectable.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/JobAttributes.html)    [**NO FRAMES**](http://docs.google.com/JobAttributes.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | FIELD | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#3rdcrjn) |

## **java.awt**

Class JobAttributes

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.awt.JobAttributes**

**All Implemented Interfaces:** [Cloneable](http://docs.google.com/java/lang/Cloneable.html)

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

A set of attributes which control a print job.

Instances of this class control the number of copies, default selection, destination, print dialog, file and printer names, page ranges, multiple document handling (including collation), and multi-page imposition (such as duplex) of every print job which uses the instance. Attribute names are compliant with the Internet Printing Protocol (IPP) 1.1 where possible. Attribute values are partially compliant where possible.

To use a method which takes an inner class type, pass a reference to one of the constant fields of the inner class. Client code cannot create new instances of the inner class types because none of those classes has a public constructor. For example, to set the print dialog type to the cross-platform, pure Java print dialog, use the following code:

import java.awt.JobAttributes;  
  
 public class PureJavaPrintDialogExample {  
 public void setPureJavaPrintDialog(JobAttributes jobAttributes) {  
 jobAttributes.setDialog(JobAttributes.DialogType.COMMON);  
 }  
 }

Every IPP attribute which supports an *attributeName*-default value has a corresponding set*attributeName*ToDefault method. Default value fields are not provided.

**Since:** 1.3

| **Nested Class Summary** | |
| --- | --- |
| static class | [**JobAttributes.DefaultSelectionType**](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html)            A type-safe enumeration of possible default selection states. |
| static class | [**JobAttributes.DestinationType**](http://docs.google.com/java/awt/JobAttributes.DestinationType.html)            A type-safe enumeration of possible job destinations. |
| static class | [**JobAttributes.DialogType**](http://docs.google.com/java/awt/JobAttributes.DialogType.html)            A type-safe enumeration of possible dialogs to display to the user. |
| static class | [**JobAttributes.MultipleDocumentHandlingType**](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html)            A type-safe enumeration of possible multiple copy handling states. |
| static class | [**JobAttributes.SidesType**](http://docs.google.com/java/awt/JobAttributes.SidesType.html)            A type-safe enumeration of possible multi-page impositions. |

| **Constructor Summary** | |
| --- | --- |
| [**JobAttributes**](http://docs.google.com/java/awt/JobAttributes.html#JobAttributes())()            Constructs a JobAttributes instance with default values for every attribute. |
| [**JobAttributes**](http://docs.google.com/java/awt/JobAttributes.html#JobAttributes(int,%20java.awt.JobAttributes.DefaultSelectionType,%20java.awt.JobAttributes.DestinationType,%20java.awt.JobAttributes.DialogType,%20java.lang.String,%20int,%20int,%20java.awt.JobAttributes.MultipleDocumentHandlingType,%20int%5B%5D%5B%5D,%20java.lang.String,%20java.awt.JobAttributes.SidesType))(int copies, [JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) defaultSelection, [JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) destination, [JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) dialog, [String](http://docs.google.com/java/lang/String.html) fileName, int maxPage, int minPage, [JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) multipleDocumentHandling, int[][] pageRanges, [String](http://docs.google.com/java/lang/String.html) printer, [JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) sides)            Constructs a JobAttributes instance with the specified values for every attribute. |
| [**JobAttributes**](http://docs.google.com/java/awt/JobAttributes.html#JobAttributes(java.awt.JobAttributes))([JobAttributes](http://docs.google.com/java/awt/JobAttributes.html) obj)            Constructs a JobAttributes instance which is a copy of the supplied JobAttributes. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/java/awt/JobAttributes.html#clone())()            Creates and returns a copy of this JobAttributes. |
| boolean | [**equals**](http://docs.google.com/java/awt/JobAttributes.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) obj)            Determines whether two JobAttributes are equal to each other. |
| int | [**getCopies**](http://docs.google.com/java/awt/JobAttributes.html#getCopies())()            Returns the number of copies the application should render for jobs using these attributes. |
| [JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) | [**getDefaultSelection**](http://docs.google.com/java/awt/JobAttributes.html#getDefaultSelection())()            Specifies whether, for jobs using these attributes, the application should print all pages, the range specified by the return value of getPageRanges, or the current selection. |
| [JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) | [**getDestination**](http://docs.google.com/java/awt/JobAttributes.html#getDestination())()            Specifies whether output will be to a printer or a file for jobs using these attributes. |
| [JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) | [**getDialog**](http://docs.google.com/java/awt/JobAttributes.html#getDialog())()            Returns whether, for jobs using these attributes, the user should see a print dialog in which to modify the print settings, and which type of print dialog should be displayed. |
| [String](http://docs.google.com/java/lang/String.html) | [**getFileName**](http://docs.google.com/java/awt/JobAttributes.html#getFileName())()            Specifies the file name for the output file for jobs using these attributes. |
| int | [**getFromPage**](http://docs.google.com/java/awt/JobAttributes.html#getFromPage())()            Returns, for jobs using these attributes, the first page to be printed, if a range of pages is to be printed. |
| int | [**getMaxPage**](http://docs.google.com/java/awt/JobAttributes.html#getMaxPage())()            Specifies the maximum value the user can specify as the last page to be printed for jobs using these attributes. |
| int | [**getMinPage**](http://docs.google.com/java/awt/JobAttributes.html#getMinPage())()            Specifies the minimum value the user can specify as the first page to be printed for jobs using these attributes. |
| [JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) | [**getMultipleDocumentHandling**](http://docs.google.com/java/awt/JobAttributes.html#getMultipleDocumentHandling())()            Specifies the handling of multiple copies, including collation, for jobs using these attributes. |
| int[][] | [**getPageRanges**](http://docs.google.com/java/awt/JobAttributes.html#getPageRanges())()            Specifies, for jobs using these attributes, the ranges of pages to be printed, if a range of pages is to be printed. |
| [String](http://docs.google.com/java/lang/String.html) | [**getPrinter**](http://docs.google.com/java/awt/JobAttributes.html#getPrinter())()            Returns the destination printer for jobs using these attributes. |
| [JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) | [**getSides**](http://docs.google.com/java/awt/JobAttributes.html#getSides())()            Returns how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes. |
| int | [**getToPage**](http://docs.google.com/java/awt/JobAttributes.html#getToPage())()            Returns, for jobs using these attributes, the last page (inclusive) to be printed, if a range of pages is to be printed. |
| int | [**hashCode**](http://docs.google.com/java/awt/JobAttributes.html#hashCode())()            Returns a hash code value for this JobAttributes. |
| void | [**set**](http://docs.google.com/java/awt/JobAttributes.html#set(java.awt.JobAttributes))([JobAttributes](http://docs.google.com/java/awt/JobAttributes.html) obj)            Sets all of the attributes of this JobAttributes to the same values as the attributes of obj. |
| void | [**setCopies**](http://docs.google.com/java/awt/JobAttributes.html#setCopies(int))(int copies)            Specifies the number of copies the application should render for jobs using these attributes. |
| void | [**setCopiesToDefault**](http://docs.google.com/java/awt/JobAttributes.html#setCopiesToDefault())()            Sets the number of copies the application should render for jobs using these attributes to the default. |
| void | [**setDefaultSelection**](http://docs.google.com/java/awt/JobAttributes.html#setDefaultSelection(java.awt.JobAttributes.DefaultSelectionType))([JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) defaultSelection)            Specifies whether, for jobs using these attributes, the application should print all pages, the range specified by the return value of getPageRanges, or the current selection. |
| void | [**setDestination**](http://docs.google.com/java/awt/JobAttributes.html#setDestination(java.awt.JobAttributes.DestinationType))([JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) destination)            Specifies whether output will be to a printer or a file for jobs using these attributes. |
| void | [**setDialog**](http://docs.google.com/java/awt/JobAttributes.html#setDialog(java.awt.JobAttributes.DialogType))([JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) dialog)            Specifies whether, for jobs using these attributes, the user should see a print dialog in which to modify the print settings, and which type of print dialog should be displayed. |
| void | [**setFileName**](http://docs.google.com/java/awt/JobAttributes.html#setFileName(java.lang.String))([String](http://docs.google.com/java/lang/String.html) fileName)            Specifies the file name for the output file for jobs using these attributes. |
| void | [**setFromPage**](http://docs.google.com/java/awt/JobAttributes.html#setFromPage(int))(int fromPage)            Specifies, for jobs using these attributes, the first page to be printed, if a range of pages is to be printed. |
| void | [**setMaxPage**](http://docs.google.com/java/awt/JobAttributes.html#setMaxPage(int))(int maxPage)            Specifies the maximum value the user can specify as the last page to be printed for jobs using these attributes. |
| void | [**setMinPage**](http://docs.google.com/java/awt/JobAttributes.html#setMinPage(int))(int minPage)            Specifies the minimum value the user can specify as the first page to be printed for jobs using these attributes. |
| void | [**setMultipleDocumentHandling**](http://docs.google.com/java/awt/JobAttributes.html#setMultipleDocumentHandling(java.awt.JobAttributes.MultipleDocumentHandlingType))([JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) multipleDocumentHandling)            Specifies the handling of multiple copies, including collation, for jobs using these attributes. |
| void | [**setMultipleDocumentHandlingToDefault**](http://docs.google.com/java/awt/JobAttributes.html#setMultipleDocumentHandlingToDefault())()            Sets the handling of multiple copies, including collation, for jobs using these attributes to the default. |
| void | [**setPageRanges**](http://docs.google.com/java/awt/JobAttributes.html#setPageRanges(int%5B%5D%5B%5D))(int[][] pageRanges)            Specifies, for jobs using these attributes, the ranges of pages to be printed, if a range of pages is to be printed. |
| void | [**setPrinter**](http://docs.google.com/java/awt/JobAttributes.html#setPrinter(java.lang.String))([String](http://docs.google.com/java/lang/String.html) printer)            Specifies the destination printer for jobs using these attributes. |
| void | [**setSides**](http://docs.google.com/java/awt/JobAttributes.html#setSides(java.awt.JobAttributes.SidesType))([JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) sides)            Specifies how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes. |
| void | [**setSidesToDefault**](http://docs.google.com/java/awt/JobAttributes.html#setSidesToDefault())()            Sets how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes to the default. |
| void | [**setToPage**](http://docs.google.com/java/awt/JobAttributes.html#setToPage(int))(int toPage)            Specifies, for jobs using these attributes, the last page (inclusive) to be printed, if a range of pages is to be printed. |
| [String](http://docs.google.com/java/lang/String.html) | [**toString**](http://docs.google.com/java/awt/JobAttributes.html#toString())()            Returns a string representation of this JobAttributes. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [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** |
| --- |

### JobAttributes

public **JobAttributes**()

Constructs a JobAttributes instance with default values for every attribute. The dialog defaults to DialogType.NATIVE. Min page defaults to 1. Max page defaults to Integer.MAX\_VALUE. Destination defaults to DestinationType.PRINTER. Selection defaults to DefaultSelectionType.ALL. Number of copies defaults to 1. Multiple document handling defaults to MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES. Sides defaults to SidesType.ONE\_SIDED. File name defaults to null.

### JobAttributes

public **JobAttributes**([JobAttributes](http://docs.google.com/java/awt/JobAttributes.html) obj)

Constructs a JobAttributes instance which is a copy of the supplied JobAttributes.

**Parameters:**obj - the JobAttributes to copy

### JobAttributes

public **JobAttributes**(int copies,  
 [JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) defaultSelection,  
 [JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) destination,  
 [JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) dialog,  
 [String](http://docs.google.com/java/lang/String.html) fileName,  
 int maxPage,  
 int minPage,  
 [JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) multipleDocumentHandling,  
 int[][] pageRanges,  
 [String](http://docs.google.com/java/lang/String.html) printer,  
 [JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) sides)

Constructs a JobAttributes instance with the specified values for every attribute.

**Parameters:**copies - an integer greater than 0defaultSelection - DefaultSelectionType.ALL, DefaultSelectionType.RANGE, or DefaultSelectionType.SELECTIONdestination - DesintationType.FILE or DesintationType.PRINTERdialog - DialogType.COMMON, DialogType.NATIVE, or DialogType.NONEfileName - the possibly null file namemaxPage - an integer greater than zero and greater than or equal to *minPage*minPage - an integer greater than zero and less than or equal to *maxPage*multipleDocumentHandling - MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_COLLATED\_COPIES or MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIESpageRanges - an array of integer arrays of two elements; an array is interpreted as a range spanning all pages including and between the specified pages; ranges must be in ascending order and must not overlap; specified page numbers cannot be less than *minPage* nor greater than *maxPage*; for example:

(new int[][] { new int[] { 1, 3 }, new int[] { 5, 5 },  
 new int[] { 15, 19 } }),

specifies pages 1, 2, 3, 5, 15, 16, 17, 18, and 19. Note that (new int[][] { new int[] { 1, 1 }, new int[] { 1, 2 } }), is an invalid set of page ranges because the two ranges overlapprinter - the possibly null printer namesides - SidesType.ONE\_SIDED, SidesType.TWO\_SIDED\_LONG\_EDGE, or SidesType.TWO\_SIDED\_SHORT\_EDGE **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated

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

### clone

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

Creates and returns a copy of this JobAttributes.

**Overrides:**[clone](http://docs.google.com/java/lang/Object.html#clone()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the newly created copy; it is safe to cast this Object into a JobAttributes**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

### set

public void **set**([JobAttributes](http://docs.google.com/java/awt/JobAttributes.html) obj)

Sets all of the attributes of this JobAttributes to the same values as the attributes of obj.

**Parameters:**obj - the JobAttributes to copy

### getCopies

public int **getCopies**()

Returns the number of copies the application should render for jobs using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**an integer greater than 0.

### setCopies

public void **setCopies**(int copies)

Specifies the number of copies the application should render for jobs using these attributes. Not specifying this attribute is equivalent to specifying 1.

**Parameters:**copies - an integer greater than 0 **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if copies is less than or equal to 0

### setCopiesToDefault

public void **setCopiesToDefault**()

Sets the number of copies the application should render for jobs using these attributes to the default. The default number of copies is 1.

### getDefaultSelection

public [JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) **getDefaultSelection**()

Specifies whether, for jobs using these attributes, the application should print all pages, the range specified by the return value of getPageRanges, or the current selection. This attribute is updated to the value chosen by the user.

**Returns:**DefaultSelectionType.ALL, DefaultSelectionType.RANGE, or DefaultSelectionType.SELECTION

### setDefaultSelection

public void **setDefaultSelection**([JobAttributes.DefaultSelectionType](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) defaultSelection)

Specifies whether, for jobs using these attributes, the application should print all pages, the range specified by the return value of getPageRanges, or the current selection. Not specifying this attribute is equivalent to specifying DefaultSelectionType.ALL.

**Parameters:**defaultSelection - DefaultSelectionType.ALL, DefaultSelectionType.RANGE, or DefaultSelectionType.SELECTION. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if defaultSelection is null

### getDestination

public [JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) **getDestination**()

Specifies whether output will be to a printer or a file for jobs using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**DesintationType.FILE or DesintationType.PRINTER

### setDestination

public void **setDestination**([JobAttributes.DestinationType](http://docs.google.com/java/awt/JobAttributes.DestinationType.html) destination)

Specifies whether output will be to a printer or a file for jobs using these attributes. Not specifying this attribute is equivalent to specifying DesintationType.PRINTER.

**Parameters:**destination - DesintationType.FILE or DesintationType.PRINTER. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if destination is null.

### getDialog

public [JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) **getDialog**()

Returns whether, for jobs using these attributes, the user should see a print dialog in which to modify the print settings, and which type of print dialog should be displayed. DialogType.COMMON denotes a cross- platform, pure Java print dialog. DialogType.NATIVE denotes the platform's native print dialog. If a platform does not support a native print dialog, the pure Java print dialog is displayed instead. DialogType.NONE specifies no print dialog (i.e., background printing). This attribute cannot be modified by, and is not subject to any limitations of, the implementation or the target printer.

**Returns:**DialogType.COMMON, DialogType.NATIVE, or DialogType.NONE

### setDialog

public void **setDialog**([JobAttributes.DialogType](http://docs.google.com/java/awt/JobAttributes.DialogType.html) dialog)

Specifies whether, for jobs using these attributes, the user should see a print dialog in which to modify the print settings, and which type of print dialog should be displayed. DialogType.COMMON denotes a cross- platform, pure Java print dialog. DialogType.NATIVE denotes the platform's native print dialog. If a platform does not support a native print dialog, the pure Java print dialog is displayed instead. DialogType.NONE specifies no print dialog (i.e., background printing). Not specifying this attribute is equivalent to specifying DialogType.NATIVE.

**Parameters:**dialog - DialogType.COMMON, DialogType.NATIVE, or DialogType.NONE. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if dialog is null.

### getFileName

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

Specifies the file name for the output file for jobs using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**the possibly null file name

### setFileName

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

Specifies the file name for the output file for jobs using these attributes. Default is platform-dependent and implementation-defined.

**Parameters:**fileName - the possibly null file name.

### getFromPage

public int **getFromPage**()

Returns, for jobs using these attributes, the first page to be printed, if a range of pages is to be printed. This attribute is updated to the value chosen by the user. An application should ignore this attribute on output, unless the return value of the getDefaultSelection method is DefaultSelectionType.RANGE. An application should honor the return value of getPageRanges over the return value of this method, if possible.

**Returns:**an integer greater than zero and less than or equal to *toPage* and greater than or equal to *minPage* and less than or equal to *maxPage*.

### setFromPage

public void **setFromPage**(int fromPage)

Specifies, for jobs using these attributes, the first page to be printed, if a range of pages is to be printed. If this attribute is not specified, then the values from the pageRanges attribute are used. If pageRanges and either or both of fromPage and toPage are specified, pageRanges takes precedence. Specifying none of pageRanges, fromPage, or toPage is equivalent to calling setPageRanges(new int[][] { new int[] { *minPage* } });

**Parameters:**fromPage - an integer greater than zero and less than or equal to *toPage* and greater than or equal to *minPage* and less than or equal to *maxPage*. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

### getMaxPage

public int **getMaxPage**()

Specifies the maximum value the user can specify as the last page to be printed for jobs using these attributes. This attribute cannot be modified by, and is not subject to any limitations of, the implementation or the target printer.

**Returns:**an integer greater than zero and greater than or equal to *minPage*.

### setMaxPage

public void **setMaxPage**(int maxPage)

Specifies the maximum value the user can specify as the last page to be printed for jobs using these attributes. Not specifying this attribute is equivalent to specifying Integer.MAX\_VALUE.

**Parameters:**maxPage - an integer greater than zero and greater than or equal to *minPage* **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated

### getMinPage

public int **getMinPage**()

Specifies the minimum value the user can specify as the first page to be printed for jobs using these attributes. This attribute cannot be modified by, and is not subject to any limitations of, the implementation or the target printer.

**Returns:**an integer greater than zero and less than or equal to *maxPage*.

### setMinPage

public void **setMinPage**(int minPage)

Specifies the minimum value the user can specify as the first page to be printed for jobs using these attributes. Not specifying this attribute is equivalent to specifying 1.

**Parameters:**minPage - an integer greater than zero and less than or equal to *maxPage*. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

### getMultipleDocumentHandling

public [JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) **getMultipleDocumentHandling**()

Specifies the handling of multiple copies, including collation, for jobs using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_COLLATED\_COPIES or MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES.

### setMultipleDocumentHandling

public void **setMultipleDocumentHandling**([JobAttributes.MultipleDocumentHandlingType](http://docs.google.com/java/awt/JobAttributes.MultipleDocumentHandlingType.html) multipleDocumentHandling)

Specifies the handling of multiple copies, including collation, for jobs using these attributes. Not specifying this attribute is equivalent to specifying MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES.

**Parameters:**multipleDocumentHandling - MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_COLLATED\_COPIES or MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if multipleDocumentHandling is null.

### setMultipleDocumentHandlingToDefault

public void **setMultipleDocumentHandlingToDefault**()

Sets the handling of multiple copies, including collation, for jobs using these attributes to the default. The default handling is MultipleDocumentHandlingType.SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES.

### getPageRanges

public int[][] **getPageRanges**()

Specifies, for jobs using these attributes, the ranges of pages to be printed, if a range of pages is to be printed. All range numbers are inclusive. This attribute is updated to the value chosen by the user. An application should ignore this attribute on output, unless the return value of the getDefaultSelection method is DefaultSelectionType.RANGE.

**Returns:**an array of integer arrays of 2 elements. An array is interpreted as a range spanning all pages including and between the specified pages. Ranges must be in ascending order and must not overlap. Specified page numbers cannot be less than *minPage* nor greater than *maxPage*. For example: (new int[][] { new int[] { 1, 3 }, new int[] { 5, 5 }, new int[] { 15, 19 } }), specifies pages 1, 2, 3, 5, 15, 16, 17, 18, and 19.

### setPageRanges

public void **setPageRanges**(int[][] pageRanges)

Specifies, for jobs using these attributes, the ranges of pages to be printed, if a range of pages is to be printed. All range numbers are inclusive. If this attribute is not specified, then the values from the fromPage and toPages attributes are used. If pageRanges and either or both of fromPage and toPage are specified, pageRanges takes precedence. Specifying none of pageRanges, fromPage, or toPage is equivalent to calling setPageRanges(new int[][] { new int[] { *minPage*, *minPage* } });

**Parameters:**pageRanges - an array of integer arrays of 2 elements. An array is interpreted as a range spanning all pages including and between the specified pages. Ranges must be in ascending order and must not overlap. Specified page numbers cannot be less than *minPage* nor greater than *maxPage*. For example: (new int[][] { new int[] { 1, 3 }, new int[] { 5, 5 }, new int[] { 15, 19 } }), specifies pages 1, 2, 3, 5, 15, 16, 17, 18, and 19. Note that (new int[][] { new int[] { 1, 1 }, new int[] { 1, 2 } }), is an invalid set of page ranges because the two ranges overlap. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

### getPrinter

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

Returns the destination printer for jobs using these attributes. This attribute is updated to the value chosen by the user.

**Returns:**the possibly null printer name.

### setPrinter

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

Specifies the destination printer for jobs using these attributes. Default is platform-dependent and implementation-defined.

**Parameters:**printer - the possibly null printer name.

### getSides

public [JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) **getSides**()

Returns how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes. SidesType.ONE\_SIDED imposes each consecutive page upon the same side of consecutive media sheets. This imposition is sometimes called *simplex*. SidesType.TWO\_SIDED\_LONG\_EDGE imposes each consecutive pair of pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of pages on the medium would be correct for the reader as if for binding on the long edge. This imposition is sometimes called *duplex*. SidesType.TWO\_SIDED\_SHORT\_EDGE imposes each consecutive pair of pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of pages on the medium would be correct for the reader as if for binding on the short edge. This imposition is sometimes called *tumble*. This attribute is updated to the value chosen by the user.

**Returns:**SidesType.ONE\_SIDED, SidesType.TWO\_SIDED\_LONG\_EDGE, or SidesType.TWO\_SIDED\_SHORT\_EDGE.

### setSides

public void **setSides**([JobAttributes.SidesType](http://docs.google.com/java/awt/JobAttributes.SidesType.html) sides)

Specifies how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes. SidesType.ONE\_SIDED imposes each consecutive page upon the same side of consecutive media sheets. This imposition is sometimes called *simplex*. SidesType.TWO\_SIDED\_LONG\_EDGE imposes each consecutive pair of pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of pages on the medium would be correct for the reader as if for binding on the long edge. This imposition is sometimes called *duplex*. SidesType.TWO\_SIDED\_SHORT\_EDGE imposes each consecutive pair of pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of pages on the medium would be correct for the reader as if for binding on the short edge. This imposition is sometimes called *tumble*. Not specifying this attribute is equivalent to specifying SidesType.ONE\_SIDED.

**Parameters:**sides - SidesType.ONE\_SIDED, SidesType.TWO\_SIDED\_LONG\_EDGE, or SidesType.TWO\_SIDED\_SHORT\_EDGE. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if sides is null.

### setSidesToDefault

public void **setSidesToDefault**()

Sets how consecutive pages should be imposed upon the sides of the print medium for jobs using these attributes to the default. The default imposition is SidesType.ONE\_SIDED.

### getToPage

public int **getToPage**()

Returns, for jobs using these attributes, the last page (inclusive) to be printed, if a range of pages is to be printed. This attribute is updated to the value chosen by the user. An application should ignore this attribute on output, unless the return value of the getDefaultSelection method is DefaultSelectionType.RANGE. An application should honor the return value of getPageRanges over the return value of this method, if possible.

**Returns:**an integer greater than zero and greater than or equal to *toPage* and greater than or equal to *minPage* and less than or equal to *maxPage*.

### setToPage

public void **setToPage**(int toPage)

Specifies, for jobs using these attributes, the last page (inclusive) to be printed, if a range of pages is to be printed. If this attribute is not specified, then the values from the pageRanges attribute are used. If pageRanges and either or both of fromPage and toPage are specified, pageRanges takes precedence. Specifying none of pageRanges, fromPage, or toPage is equivalent to calling setPageRanges(new int[][] { new int[] { *minPage* } });

**Parameters:**toPage - an integer greater than zero and greater than or equal to *fromPage* and greater than or equal to *minPage* and less than or equal to *maxPage*. **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if one or more of the above conditions is violated.

### equals

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

Determines whether two JobAttributes are equal to each other.

Two JobAttributes are equal if and only if each of their attributes are equal. Attributes of enumeration type are equal if and only if the fields refer to the same unique enumeration object. A set of page ranges is equal if and only if the sets are of equal length, each range enumerates the same pages, and the ranges are in the same order.

**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 whose equality will be checked. **Returns:**whether obj is equal to this JobAttribute according to the above criteria.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### hashCode

public int **hashCode**()

Returns a hash code value for this JobAttributes.

**Overrides:**[hashCode](http://docs.google.com/java/lang/Object.html#hashCode()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**the hash code.**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 [String](http://docs.google.com/java/lang/String.html) **toString**()

Returns a string representation of this JobAttributes.

**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/JobAttributes.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/java/awt/ItemSelectable.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/JobAttributes.DefaultSelectionType.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/JobAttributes.html)    [**NO FRAMES**](http://docs.google.com/JobAttributes.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: [NESTED](#3znysh7) | FIELD | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: FIELD | [CONSTR](#1t3h5sf) | [METHOD](#3rdcrjn) |

[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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