| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Printable.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/print/Paper.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/print/PrinterAbortException.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/print/Printable.html)    [**NO FRAMES**](http://docs.google.com/Printable.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | [METHOD](#2et92p0) | DETAIL: [FIELD](#tyjcwt) | CONSTR | [METHOD](#4d34og8) |

## **java.awt.print**

Interface Printable

public interface **Printable**

The Printable interface is implemented by the print methods of the current page painter, which is called by the printing system to render a page. When building a [Pageable](http://docs.google.com/java/awt/print/Pageable.html), pairs of [PageFormat](http://docs.google.com/java/awt/print/PageFormat.html) instances and instances that implement this interface are used to describe each page. The instance implementing Printable is called to print the page's graphics.

A Printable(..) may be set on a PrinterJob. When the client subsequently initiates printing by calling PrinterJob.print(..) control

is handed to the printing system until all pages have been printed. It does this by calling Printable.print(..) until all pages in the document have been printed. In using the Printable interface the printing commits to image the contents of a page whenever requested by the printing system.

The parameters to Printable.print(..) include a PageFormat which describes the printable area of the page, needed for calculating the contents that will fit the page, and the page index, which specifies the zero-based print stream index of the requested page.

For correct printing behaviour, the following points should be observed:

* The printing system may request a page index more than once. On each occasion equal PageFormat parameters will be supplied.
* The printing system will call Printable.print(..) with page indexes which increase monotonically, although as noted above, the Printable should expect multiple calls for a page index and that page indexes may be skipped, when page ranges are specified by the client, or by a user through a print dialog.
* If multiple collated copies of a document are requested, and the printer cannot natively support this, then the document may be imaged multiple times. Printing will start each copy from the lowest print stream page index page.
* With the exception of re-imaging an entire document for multiple collated copies, the increasing page index order means that when page N is requested if a client needs to calculate page break position, it may safely discard any state related to pages < N, and make current that for page N. "State" usually is just the calculated position in the document that corresponds to the start of the page.
* When called by the printing system the Printable must inspect and honour the supplied PageFormat parameter as well as the page index. The format of the page to be drawn is specified by the supplied PageFormat. The size, orientation and imageable area of the page is therefore already determined and rendering must be within this imageable area. This is key to correct printing behaviour, and it has the implication that the client has the responsibility of tracking what content belongs on the specified page.
* When the Printable is obtained from a client-supplied Pageable then the client may provide different PageFormats for each page index. Calculations of page breaks must account for this.

**See Also:**[Pageable](http://docs.google.com/java/awt/print/Pageable.html), [PageFormat](http://docs.google.com/java/awt/print/PageFormat.html), [PrinterJob](http://docs.google.com/java/awt/print/PrinterJob.html)

| **Field Summary** | |
| --- | --- |
| static int | [**NO\_SUCH\_PAGE**](http://docs.google.com/java/awt/print/Printable.html#NO_SUCH_PAGE)            Returned from print to signify that the pageIndex is too large and that the requested page does not exist. |
| static int | [**PAGE\_EXISTS**](http://docs.google.com/java/awt/print/Printable.html#PAGE_EXISTS)            Returned from [print(Graphics, PageFormat, int)](http://docs.google.com/java/awt/print/Printable.html#print(java.awt.Graphics,%20java.awt.print.PageFormat,%20int)) to signify that the requested page was rendered. |

| **Method Summary** | |
| --- | --- |
| int | [**print**](http://docs.google.com/java/awt/print/Printable.html#print(java.awt.Graphics,%20java.awt.print.PageFormat,%20int))([Graphics](http://docs.google.com/java/awt/Graphics.html) graphics, [PageFormat](http://docs.google.com/java/awt/print/PageFormat.html) pageFormat, int pageIndex)            Prints the page at the specified index into the specified [Graphics](http://docs.google.com/java/awt/Graphics.html) context in the specified format. |

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

### PAGE\_EXISTS

static final int **PAGE\_EXISTS**

Returned from [print(Graphics, PageFormat, int)](http://docs.google.com/java/awt/print/Printable.html#print(java.awt.Graphics,%20java.awt.print.PageFormat,%20int)) to signify that the requested page was rendered.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.print.Printable.PAGE_EXISTS)

### NO\_SUCH\_PAGE

static final int **NO\_SUCH\_PAGE**

Returned from print to signify that the pageIndex is too large and that the requested page does not exist.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.print.Printable.NO_SUCH_PAGE)

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

### print

int **print**([Graphics](http://docs.google.com/java/awt/Graphics.html) graphics,  
 [PageFormat](http://docs.google.com/java/awt/print/PageFormat.html) pageFormat,  
 int pageIndex)  
 throws [PrinterException](http://docs.google.com/java/awt/print/PrinterException.html)

Prints the page at the specified index into the specified [Graphics](http://docs.google.com/java/awt/Graphics.html) context in the specified format. A PrinterJob calls the Printable interface to request that a page be rendered into the context specified by graphics. The format of the page to be drawn is specified by pageFormat. The zero based index of the requested page is specified by pageIndex. If the requested page does not exist then this method returns NO\_SUCH\_PAGE; otherwise PAGE\_EXISTS is returned. The Graphics class or subclass implements the [PrinterGraphics](http://docs.google.com/java/awt/print/PrinterGraphics.html) interface to provide additional information. If the Printable object aborts the print job then it throws a [PrinterException](http://docs.google.com/java/awt/print/PrinterException.html).

**Parameters:**graphics - the context into which the page is drawnpageFormat - the size and orientation of the page being drawnpageIndex - the zero based index of the page to be drawn **Returns:**PAGE\_EXISTS if the page is rendered successfully or NO\_SUCH\_PAGE if pageIndex specifies a non-existent page. **Throws:** [PrinterException](http://docs.google.com/java/awt/print/PrinterException.html) - thrown when the print job is terminated.

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Printable.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/print/Paper.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/print/PrinterAbortException.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/print/Printable.html)    [**NO FRAMES**](http://docs.google.com/Printable.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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