| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/Sides.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/SheetCollate.html)   NEXT CLASS | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/Sides.html)    [**NO FRAMES**](http://docs.google.com/Sides.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#4d34og8) | [CONSTR](#35nkun2) | [METHOD](#44sinio) |

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

Class Sides

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

**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 **Sides**extends [EnumSyntax](http://docs.google.com/javax/print/attribute/EnumSyntax.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 Sides is a printing attribute class, an enumeration, that specifies how print-stream pages are to be imposed upon the sides of an instance of a selected medium, i.e., an impression.

The effect of a Sides attribute on a multidoc print job (a job with multiple documents) depends on whether all the docs have the same sides values specified or whether different docs have different sides values 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 sides value *n* 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. Each media sheet will consist of *n* impressions from the output document.
  + SINGLE\_DOCUMENT\_NEW\_SHEET -- All the input docs will be combined together into one output document. Each media sheet will consist of *n* impressions from the output document. However, the first impression of each input doc will always start on a new media sheet; this means the last media sheet of an input doc may have only one impression on it.
  + SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES -- The input docs will remain separate. Each media sheet will consist of *n* impressions from the input doc. Since the input docs are separate, the first impression of each input doc will always start on a new media sheet; this means the last media sheet of an input doc may have only one impression on it.
  + SEPARATE\_DOCUMENTS\_COLLATED\_COPIES -- The input docs will remain separate. Each media sheet will consist of *n* impressions from the input doc. Since the input docs are separate, the first impression of each input doc will always start on a new media sheet; this means the last media sheet of an input doc may have only one impression on it.
  + SINGLE\_DOCUMENT -- All the input docs will be combined together into one output document. Each media sheet will consist of *ni* impressions from the output document, where *i* is the number of the input doc corresponding to that point in the output document. When the next input doc has a different sides value from the previous input doc, the first print-stream page of the next input doc goes at the start of the next media sheet, possibly leaving only one impression on the previous media sheet.
  + SINGLE\_DOCUMENT\_NEW\_SHEET -- All the input docs will be combined together into one output document. Each media sheet will consist of *n* impressions from the output document. However, the first impression of each input doc will always start on a new media sheet; this means the last impression of an input doc may have only one impression on it.
  + SEPARATE\_DOCUMENTS\_UNCOLLATED\_COPIES -- The input docs will remain separate. For input doc *i,* each media sheet will consist of *ni* impressions from the input doc. Since the input docs are separate, the first impression of each input doc will always start on a new media sheet; this means the last media sheet of an input doc may have only one impression on it.
  + SEPARATE\_DOCUMENTS\_COLLATED\_COPIES -- The input docs will remain separate. For input doc *i,* each media sheet will consist of *ni* impressions from the input doc. Since the input docs are separate, the first impression of each input doc will always start on a new media sheet; this means the last media sheet of an input doc may have only one impression on it.

**IPP Compatibility:** The category name returned by getName() is the IPP attribute name. The enumeration's integer value is the IPP enum value. The toString() method returns the IPP string representation of the attribute value.

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

| **Field Summary** | |
| --- | --- |
| static [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) | [**DUPLEX**](http://docs.google.com/javax/print/attribute/standard/Sides.html#DUPLEX)            An alias for "two sided long edge" (see [TWO\_SIDED\_LONG\_EDGE](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_LONG_EDGE)). |
| static [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) | [**ONE\_SIDED**](http://docs.google.com/javax/print/attribute/standard/Sides.html#ONE_SIDED)            Imposes each consecutive print-stream page upon the same side of consecutive media sheets. |
| static [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) | [**TUMBLE**](http://docs.google.com/javax/print/attribute/standard/Sides.html#TUMBLE)            An alias for "two sided short edge" (see [TWO\_SIDED\_SHORT\_EDGE](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_SHORT_EDGE)). |
| static [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) | [**TWO\_SIDED\_LONG\_EDGE**](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_LONG_EDGE)            Imposes each consecutive pair of print-stream pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of print-stream pages on the medium would be correct for the reader as if for binding on the long edge. |
| static [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) | [**TWO\_SIDED\_SHORT\_EDGE**](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_SHORT_EDGE)            Imposes each consecutive pair of print-stream pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of print-stream pages on the medium would be correct for the reader as if for binding on the short edge. |

| **Constructor Summary** | |
| --- | --- |
| protected | [**Sides**](http://docs.google.com/javax/print/attribute/standard/Sides.html#Sides(int))(int value)            Construct a new sides enumeration value with the given integer value. |

| **Method Summary** | |
| --- | --- |
| [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/Sides.html#getCategory())()            Get the printing attribute class which is to be used as the "category" for this printing attribute value. |
| protected  [EnumSyntax](http://docs.google.com/javax/print/attribute/EnumSyntax.html)[] | [**getEnumValueTable**](http://docs.google.com/javax/print/attribute/standard/Sides.html#getEnumValueTable())()            Returns the enumeration value table for class Sides. |
| [String](http://docs.google.com/java/lang/String.html) | [**getName**](http://docs.google.com/javax/print/attribute/standard/Sides.html#getName())()            Get the name of the category of which this attribute value is an instance. |
| protected  [String](http://docs.google.com/java/lang/String.html)[] | [**getStringTable**](http://docs.google.com/javax/print/attribute/standard/Sides.html#getStringTable())()            Returns the string table for class Sides. |

| **Methods inherited from class javax.print.attribute.**[**EnumSyntax**](http://docs.google.com/javax/print/attribute/EnumSyntax.html) |
| --- |
| [clone](http://docs.google.com/javax/print/attribute/EnumSyntax.html#clone()), [getOffset](http://docs.google.com/javax/print/attribute/EnumSyntax.html#getOffset()), [getValue](http://docs.google.com/javax/print/attribute/EnumSyntax.html#getValue()), [hashCode](http://docs.google.com/javax/print/attribute/EnumSyntax.html#hashCode()), [readResolve](http://docs.google.com/javax/print/attribute/EnumSyntax.html#readResolve()), [toString](http://docs.google.com/javax/print/attribute/EnumSyntax.html#toString()) |

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

### ONE\_SIDED

public static final [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) **ONE\_SIDED**

Imposes each consecutive print-stream page upon the same side of consecutive media sheets.

### TWO\_SIDED\_LONG\_EDGE

public static final [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) **TWO\_SIDED\_LONG\_EDGE**

Imposes each consecutive pair of print-stream pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of print-stream pages on the medium would be correct for the reader as if for binding on the long edge. This imposition is also known as "duplex" (see [DUPLEX](http://docs.google.com/javax/print/attribute/standard/Sides.html#DUPLEX)).

### TWO\_SIDED\_SHORT\_EDGE

public static final [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) **TWO\_SIDED\_SHORT\_EDGE**

Imposes each consecutive pair of print-stream pages upon front and back sides of consecutive media sheets, such that the orientation of each pair of print-stream pages on the medium would be correct for the reader as if for binding on the short edge. This imposition is also known as "tumble" (see [TUMBLE](http://docs.google.com/javax/print/attribute/standard/Sides.html#TUMBLE)).

### DUPLEX

public static final [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) **DUPLEX**

An alias for "two sided long edge" (see [TWO\_SIDED\_LONG\_EDGE](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_LONG_EDGE)).

### TUMBLE

public static final [Sides](http://docs.google.com/javax/print/attribute/standard/Sides.html) **TUMBLE**

An alias for "two sided short edge" (see [TWO\_SIDED\_SHORT\_EDGE](http://docs.google.com/javax/print/attribute/standard/Sides.html#TWO_SIDED_SHORT_EDGE)).

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

### Sides

protected **Sides**(int value)

Construct a new sides enumeration value with the given integer value.

**Parameters:**value - Integer value.

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

### getStringTable

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

Returns the string table for class Sides.

**Overrides:**[getStringTable](http://docs.google.com/javax/print/attribute/EnumSyntax.html#getStringTable()) in class [EnumSyntax](http://docs.google.com/javax/print/attribute/EnumSyntax.html) **Returns:**the string table

### getEnumValueTable

protected [EnumSyntax](http://docs.google.com/javax/print/attribute/EnumSyntax.html)[] **getEnumValueTable**()

Returns the enumeration value table for class Sides.

**Overrides:**[getEnumValueTable](http://docs.google.com/javax/print/attribute/EnumSyntax.html#getEnumValueTable()) in class [EnumSyntax](http://docs.google.com/javax/print/attribute/EnumSyntax.html) **Returns:**the value table

### 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 Sides, the category is class Sides 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 Sides, the category name is "sides".

**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/Sides.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/SheetCollate.html)   NEXT CLASS | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/Sides.html)    [**NO FRAMES**](http://docs.google.com/Sides.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#4d34og8) | [CONSTR](#35nkun2) | [METHOD](#44sinio) |

[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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