| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/GridBagConstraints.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/GraphicsEnvironment.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/GridBagLayout.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/GridBagConstraints.html)    [**NO FRAMES**](http://docs.google.com/GridBagConstraints.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#2lwamvv) | [METHOD](#206ipza) |

## **java.awt**

Class GridBagConstraints

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

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

public class **GridBagConstraints**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Cloneable](http://docs.google.com/java/lang/Cloneable.html), [Serializable](http://docs.google.com/java/io/Serializable.html)

The GridBagConstraints class specifies constraints for components that are laid out using the GridBagLayout class.

**Since:** JDK1.0 **See Also:**[GridBagLayout](http://docs.google.com/java/awt/GridBagLayout.html), [Serialized Form](http://docs.google.com/serialized-form.html#java.awt.GridBagConstraints)

| **Field Summary** | |
| --- | --- |
| static int | [**ABOVE\_BASELINE**](http://docs.google.com/java/awt/GridBagConstraints.html#ABOVE_BASELINE)            Possible value for the anchor field. |
| static int | [**ABOVE\_BASELINE\_LEADING**](http://docs.google.com/java/awt/GridBagConstraints.html#ABOVE_BASELINE_LEADING)            Possible value for the anchor field. |
| static int | [**ABOVE\_BASELINE\_TRAILING**](http://docs.google.com/java/awt/GridBagConstraints.html#ABOVE_BASELINE_TRAILING)            Possible value for the anchor field. |
| int | [**anchor**](http://docs.google.com/java/awt/GridBagConstraints.html#anchor)            This field is used when the component is smaller than its display area. |
| static int | [**BASELINE**](http://docs.google.com/java/awt/GridBagConstraints.html#BASELINE)            Possible value for the anchor field. |
| static int | [**BASELINE\_LEADING**](http://docs.google.com/java/awt/GridBagConstraints.html#BASELINE_LEADING)            Possible value for the anchor field. |
| static int | [**BASELINE\_TRAILING**](http://docs.google.com/java/awt/GridBagConstraints.html#BASELINE_TRAILING)            Possible value for the anchor field. |
| static int | [**BELOW\_BASELINE**](http://docs.google.com/java/awt/GridBagConstraints.html#BELOW_BASELINE)            Possible value for the anchor field. |
| static int | [**BELOW\_BASELINE\_LEADING**](http://docs.google.com/java/awt/GridBagConstraints.html#BELOW_BASELINE_LEADING)            Possible value for the anchor field. |
| static int | [**BELOW\_BASELINE\_TRAILING**](http://docs.google.com/java/awt/GridBagConstraints.html#BELOW_BASELINE_TRAILING)            Possible value for the anchor field. |
| static int | [**BOTH**](http://docs.google.com/java/awt/GridBagConstraints.html#BOTH)            Resize the component both horizontally and vertically. |
| static int | [**CENTER**](http://docs.google.com/java/awt/GridBagConstraints.html#CENTER)            Put the component in the center of its display area. |
| static int | [**EAST**](http://docs.google.com/java/awt/GridBagConstraints.html#EAST)            Put the component on the right side of its display area, centered vertically. |
| int | [**fill**](http://docs.google.com/java/awt/GridBagConstraints.html#fill)            This field is used when the component's display area is larger than the component's requested size. |
| static int | [**FIRST\_LINE\_END**](http://docs.google.com/java/awt/GridBagConstraints.html#FIRST_LINE_END)            Place the component in the corner of its display area where the first line of text on a page would normally end for the current ComponentOrienation. |
| static int | [**FIRST\_LINE\_START**](http://docs.google.com/java/awt/GridBagConstraints.html#FIRST_LINE_START)            Place the component in the corner of its display area where the first line of text on a page would normally begin for the current ComponentOrienation. |
| int | [**gridheight**](http://docs.google.com/java/awt/GridBagConstraints.html#gridheight)            Specifies the number of cells in a column for the component's display area. |
| int | [**gridwidth**](http://docs.google.com/java/awt/GridBagConstraints.html#gridwidth)            Specifies the number of cells in a row for the component's display area. |
| int | [**gridx**](http://docs.google.com/java/awt/GridBagConstraints.html#gridx)            Specifies the cell containing the leading edge of the component's display area, where the first cell in a row has gridx=0. |
| int | [**gridy**](http://docs.google.com/java/awt/GridBagConstraints.html#gridy)            Specifies the cell at the top of the component's display area, where the topmost cell has gridy=0. |
| static int | [**HORIZONTAL**](http://docs.google.com/java/awt/GridBagConstraints.html#HORIZONTAL)            Resize the component horizontally but not vertically. |
| [Insets](http://docs.google.com/java/awt/Insets.html) | [**insets**](http://docs.google.com/java/awt/GridBagConstraints.html#insets)            This field specifies the external padding of the component, the minimum amount of space between the component and the edges of its display area. |
| int | [**ipadx**](http://docs.google.com/java/awt/GridBagConstraints.html#ipadx)            This field specifies the internal padding of the component, how much space to add to the minimum width of the component. |
| int | [**ipady**](http://docs.google.com/java/awt/GridBagConstraints.html#ipady)            This field specifies the internal padding, that is, how much space to add to the minimum height of the component. |
| static int | [**LAST\_LINE\_END**](http://docs.google.com/java/awt/GridBagConstraints.html#LAST_LINE_END)            Place the component in the corner of its display area where the last line of text on a page would normally end for the current ComponentOrienation. |
| static int | [**LAST\_LINE\_START**](http://docs.google.com/java/awt/GridBagConstraints.html#LAST_LINE_START)            Place the component in the corner of its display area where the last line of text on a page would normally start for the current ComponentOrienation. |
| static int | [**LINE\_END**](http://docs.google.com/java/awt/GridBagConstraints.html#LINE_END)            Place the component centered along the edge of its display area where lines of text would normally end for the current ComponentOrienation. |
| static int | [**LINE\_START**](http://docs.google.com/java/awt/GridBagConstraints.html#LINE_START)            Place the component centered along the edge of its display area where lines of text would normally begin for the current ComponentOrienation. |
| static int | [**NONE**](http://docs.google.com/java/awt/GridBagConstraints.html#NONE)            Do not resize the component. |
| static int | [**NORTH**](http://docs.google.com/java/awt/GridBagConstraints.html#NORTH)            Put the component at the top of its display area, centered horizontally. |
| static int | [**NORTHEAST**](http://docs.google.com/java/awt/GridBagConstraints.html#NORTHEAST)            Put the component at the top-right corner of its display area. |
| static int | [**NORTHWEST**](http://docs.google.com/java/awt/GridBagConstraints.html#NORTHWEST)            Put the component at the top-left corner of its display area. |
| static int | [**PAGE\_END**](http://docs.google.com/java/awt/GridBagConstraints.html#PAGE_END)            Place the component centered along the edge of its display area associated with the end of a page for the current ComponentOrienation. |
| static int | [**PAGE\_START**](http://docs.google.com/java/awt/GridBagConstraints.html#PAGE_START)            Place the component centered along the edge of its display area associated with the start of a page for the current ComponentOrienation. |
| static int | [**RELATIVE**](http://docs.google.com/java/awt/GridBagConstraints.html#RELATIVE)            Specifies that this component is the next-to-last component in its column or row (gridwidth, gridheight), or that this component be placed next to the previously added component (gridx, gridy). |
| static int | [**REMAINDER**](http://docs.google.com/java/awt/GridBagConstraints.html#REMAINDER)            Specifies that this component is the last component in its column or row. |
| static int | [**SOUTH**](http://docs.google.com/java/awt/GridBagConstraints.html#SOUTH)            Put the component at the bottom of its display area, centered horizontally. |
| static int | [**SOUTHEAST**](http://docs.google.com/java/awt/GridBagConstraints.html#SOUTHEAST)            Put the component at the bottom-right corner of its display area. |
| static int | [**SOUTHWEST**](http://docs.google.com/java/awt/GridBagConstraints.html#SOUTHWEST)            Put the component at the bottom-left corner of its display area. |
| static int | [**VERTICAL**](http://docs.google.com/java/awt/GridBagConstraints.html#VERTICAL)            Resize the component vertically but not horizontally. |
| double | [**weightx**](http://docs.google.com/java/awt/GridBagConstraints.html#weightx)            Specifies how to distribute extra horizontal space. |
| double | [**weighty**](http://docs.google.com/java/awt/GridBagConstraints.html#weighty)            Specifies how to distribute extra vertical space. |
| static int | [**WEST**](http://docs.google.com/java/awt/GridBagConstraints.html#WEST)            Put the component on the left side of its display area, centered vertically. |

| **Constructor Summary** | |
| --- | --- |
| [**GridBagConstraints**](http://docs.google.com/java/awt/GridBagConstraints.html#GridBagConstraints())()            Creates a GridBagConstraint object with all of its fields set to their default value. |
| [**GridBagConstraints**](http://docs.google.com/java/awt/GridBagConstraints.html#GridBagConstraints(int,%20int,%20int,%20int,%20double,%20double,%20int,%20int,%20java.awt.Insets,%20int,%20int))(int gridx, int gridy, int gridwidth, int gridheight, double weightx, double weighty, int anchor, int fill, [Insets](http://docs.google.com/java/awt/Insets.html) insets, int ipadx, int ipady)            Creates a GridBagConstraints object with all of its fields set to the passed-in arguments. |

| **Method Summary** | |
| --- | --- |
| [Object](http://docs.google.com/java/lang/Object.html) | [**clone**](http://docs.google.com/java/awt/GridBagConstraints.html#clone())()            Creates a copy of this grid bag constraint. |

| **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()), [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)) |

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

### RELATIVE

public static final int **RELATIVE**

Specifies that this component is the next-to-last component in its column or row (gridwidth, gridheight), or that this component be placed next to the previously added component (gridx, gridy).

**See Also:**[gridwidth](http://docs.google.com/java/awt/GridBagConstraints.html#gridwidth), [gridheight](http://docs.google.com/java/awt/GridBagConstraints.html#gridheight), [gridx](http://docs.google.com/java/awt/GridBagConstraints.html#gridx), [gridy](http://docs.google.com/java/awt/GridBagConstraints.html#gridy), [Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.RELATIVE)

### REMAINDER

public static final int **REMAINDER**

Specifies that this component is the last component in its column or row.

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

### NONE

public static final int **NONE**

Do not resize the component.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.NONE)

### BOTH

public static final int **BOTH**

Resize the component both horizontally and vertically.

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

### HORIZONTAL

public static final int **HORIZONTAL**

Resize the component horizontally but not vertically.

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

### VERTICAL

public static final int **VERTICAL**

Resize the component vertically but not horizontally.

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

### CENTER

public static final int **CENTER**

Put the component in the center of its display area.

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

### NORTH

public static final int **NORTH**

Put the component at the top of its display area, centered horizontally.

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

### NORTHEAST

public static final int **NORTHEAST**

Put the component at the top-right corner of its display area.

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

### EAST

public static final int **EAST**

Put the component on the right side of its display area, centered vertically.

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

### SOUTHEAST

public static final int **SOUTHEAST**

Put the component at the bottom-right corner of its display area.

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

### SOUTH

public static final int **SOUTH**

Put the component at the bottom of its display area, centered horizontally.

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

### SOUTHWEST

public static final int **SOUTHWEST**

Put the component at the bottom-left corner of its display area.

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

### WEST

public static final int **WEST**

Put the component on the left side of its display area, centered vertically.

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

### NORTHWEST

public static final int **NORTHWEST**

Put the component at the top-left corner of its display area.

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

### PAGE\_START

public static final int **PAGE\_START**

Place the component centered along the edge of its display area associated with the start of a page for the current ComponentOrienation. Equal to NORTH for horizontal orientations.

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

### PAGE\_END

public static final int **PAGE\_END**

Place the component centered along the edge of its display area associated with the end of a page for the current ComponentOrienation. Equal to SOUTH for horizontal orientations.

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

### LINE\_START

public static final int **LINE\_START**

Place the component centered along the edge of its display area where lines of text would normally begin for the current ComponentOrienation. Equal to WEST for horizontal, left-to-right orientations and EAST for horizontal, right-to-left orientations.

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

### LINE\_END

public static final int **LINE\_END**

Place the component centered along the edge of its display area where lines of text would normally end for the current ComponentOrienation. Equal to EAST for horizontal, left-to-right orientations and WEST for horizontal, right-to-left orientations.

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

### FIRST\_LINE\_START

public static final int **FIRST\_LINE\_START**

Place the component in the corner of its display area where the first line of text on a page would normally begin for the current ComponentOrienation. Equal to NORTHWEST for horizontal, left-to-right orientations and NORTHEAST for horizontal, right-to-left orientations.

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

### FIRST\_LINE\_END

public static final int **FIRST\_LINE\_END**

Place the component in the corner of its display area where the first line of text on a page would normally end for the current ComponentOrienation. Equal to NORTHEAST for horizontal, left-to-right orientations and NORTHWEST for horizontal, right-to-left orientations.

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

### LAST\_LINE\_START

public static final int **LAST\_LINE\_START**

Place the component in the corner of its display area where the last line of text on a page would normally start for the current ComponentOrienation. Equal to SOUTHWEST for horizontal, left-to-right orientations and SOUTHEAST for horizontal, right-to-left orientations.

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

### LAST\_LINE\_END

public static final int **LAST\_LINE\_END**

Place the component in the corner of its display area where the last line of text on a page would normally end for the current ComponentOrienation. Equal to SOUTHEAST for horizontal, left-to-right orientations and SOUTHWEST for horizontal, right-to-left orientations.

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

### BASELINE

public static final int **BASELINE**

Possible value for the anchor field. Specifies that the component should be horizontally centered and vertically aligned along the baseline of the prevailing row. If the component does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BASELINE)

### BASELINE\_LEADING

public static final int **BASELINE\_LEADING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the leading edge. For components with a left-to-right orientation, the leading edge is the left edge. Vertically the component is aligned along the baseline of the prevailing row. If the component does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BASELINE_LEADING)

### BASELINE\_TRAILING

public static final int **BASELINE\_TRAILING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the trailing edge. For components with a left-to-right orientation, the trailing edge is the right edge. Vertically the component is aligned along the baseline of the prevailing row. If the component does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BASELINE_TRAILING)

### ABOVE\_BASELINE

public static final int **ABOVE\_BASELINE**

Possible value for the anchor field. Specifies that the component should be horizontally centered. Vertically the component is positioned so that its bottom edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.ABOVE_BASELINE)

### ABOVE\_BASELINE\_LEADING

public static final int **ABOVE\_BASELINE\_LEADING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the leading edge. For components with a left-to-right orientation, the leading edge is the left edge. Vertically the component is positioned so that its bottom edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.ABOVE_BASELINE_LEADING)

### ABOVE\_BASELINE\_TRAILING

public static final int **ABOVE\_BASELINE\_TRAILING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the trailing edge. For components with a left-to-right orientation, the trailing edge is the right edge. Vertically the component is positioned so that its bottom edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.ABOVE_BASELINE_TRAILING)

### BELOW\_BASELINE

public static final int **BELOW\_BASELINE**

Possible value for the anchor field. Specifies that the component should be horizontally centered. Vertically the component is positioned so that its top edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BELOW_BASELINE)

### BELOW\_BASELINE\_LEADING

public static final int **BELOW\_BASELINE\_LEADING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the leading edge. For components with a left-to-right orientation, the leading edge is the left edge. Vertically the component is positioned so that its top edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BELOW_BASELINE_LEADING)

### BELOW\_BASELINE\_TRAILING

public static final int **BELOW\_BASELINE\_TRAILING**

Possible value for the anchor field. Specifies that the component should be horizontally placed along the trailing edge. For components with a left-to-right orientation, the trailing edge is the right edge. Vertically the component is positioned so that its top edge touches the baseline of the starting row. If the starting row does not have a baseline it will be vertically centered.

**Since:** 1.6 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.awt.GridBagConstraints.BELOW_BASELINE_TRAILING)

### gridx

public int **gridx**

Specifies the cell containing the leading edge of the component's display area, where the first cell in a row has gridx=0. The leading edge of a component's display area is its left edge for a horizontal, left-to-right container and its right edge for a horizontal, right-to-left container. The value RELATIVE specifies that the component be placed immediately following the component that was added to the container just before this component was added.

The default value is RELATIVE. gridx should be a non-negative value.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [gridy](http://docs.google.com/java/awt/GridBagConstraints.html#gridy), [ComponentOrientation](http://docs.google.com/java/awt/ComponentOrientation.html)

### gridy

public int **gridy**

Specifies the cell at the top of the component's display area, where the topmost cell has gridy=0. The value RELATIVE specifies that the component be placed just below the component that was added to the container just before this component was added.

The default value is RELATIVE. gridy should be a non-negative value.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [gridx](http://docs.google.com/java/awt/GridBagConstraints.html#gridx)

### gridwidth

public int **gridwidth**

Specifies the number of cells in a row for the component's display area.

Use REMAINDER to specify that the component's display area will be from gridx to the last cell in the row. Use RELATIVE to specify that the component's display area will be from gridx to the next to the last one in its row.

gridwidth should be non-negative and the default value is 1.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [gridheight](http://docs.google.com/java/awt/GridBagConstraints.html#gridheight)

### gridheight

public int **gridheight**

Specifies the number of cells in a column for the component's display area.

Use REMAINDER to specify that the component's display area will be from gridy to the last cell in the column. Use RELATIVE to specify that the component's display area will be from gridy to the next to the last one in its column.

gridheight should be a non-negative value and the default value is 1.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [gridwidth](http://docs.google.com/java/awt/GridBagConstraints.html#gridwidth)

### weightx

public double **weightx**

Specifies how to distribute extra horizontal space.

The grid bag layout manager calculates the weight of a column to be the maximum weightx of all the components in a column. If the resulting layout is smaller horizontally than the area it needs to fill, the extra space is distributed to each column in proportion to its weight. A column that has a weight of zero receives no extra space.

If all the weights are zero, all the extra space appears between the grids of the cell and the left and right edges.

The default value of this field is 0. weightx should be a non-negative value.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [weighty](http://docs.google.com/java/awt/GridBagConstraints.html#weighty)

### weighty

public double **weighty**

Specifies how to distribute extra vertical space.

The grid bag layout manager calculates the weight of a row to be the maximum weighty of all the components in a row. If the resulting layout is smaller vertically than the area it needs to fill, the extra space is distributed to each row in proportion to its weight. A row that has a weight of zero receives no extra space.

If all the weights are zero, all the extra space appears between the grids of the cell and the top and bottom edges.

The default value of this field is 0. weighty should be a non-negative value.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [weightx](http://docs.google.com/java/awt/GridBagConstraints.html#weightx)

### anchor

public int **anchor**

This field is used when the component is smaller than its display area. It determines where, within the display area, to place the component.

There are three kinds of possible values: orientation relative, baseline relative and absolute. Orientation relative values are interpreted relative to the container's component orientation property, baseline relative values are interpreted relative to the baseline and absolute values are not. The absolute values are: CENTER, NORTH, NORTHEAST, EAST, SOUTHEAST, SOUTH, SOUTHWEST, WEST, and NORTHWEST. The orientation relative values are: PAGE\_START, PAGE\_END, LINE\_START, LINE\_END, FIRST\_LINE\_START, FIRST\_LINE\_END, LAST\_LINE\_START and LAST\_LINE\_END. The baseline relvative values are: BASELINE, BASELINE\_LEADING, BASELINE\_TRAILING, ABOVE\_BASELINE, ABOVE\_BASELINE\_LEADING, ABOVE\_BASELINE\_TRAILING, BELOW\_BASELINE, BELOW\_BASELINE\_LEADING, and BELOW\_BASELINE\_TRAILING. The default value is CENTER.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [ComponentOrientation](http://docs.google.com/java/awt/ComponentOrientation.html)

### fill

public int **fill**

This field is used when the component's display area is larger than the component's requested size. It determines whether to resize the component, and if so, how.

The following values are valid for fill:

* NONE: Do not resize the component.
* HORIZONTAL: Make the component wide enough to fill its display area horizontally, but do not change its height.
* VERTICAL: Make the component tall enough to fill its display area vertically, but do not change its width.
* BOTH: Make the component fill its display area entirely.

The default value is NONE.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone())

### insets

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

This field specifies the external padding of the component, the minimum amount of space between the component and the edges of its display area.

The default value is new Insets(0, 0, 0, 0).

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone())

### ipadx

public int **ipadx**

This field specifies the internal padding of the component, how much space to add to the minimum width of the component. The width of the component is at least its minimum width plus ipadx pixels.

The default value is 0.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [ipady](http://docs.google.com/java/awt/GridBagConstraints.html#ipady)

### ipady

public int **ipady**

This field specifies the internal padding, that is, how much space to add to the minimum height of the component. The height of the component is at least its minimum height plus ipady pixels.

The default value is 0.

**See Also:**[clone()](http://docs.google.com/java/awt/GridBagConstraints.html#clone()), [ipadx](http://docs.google.com/java/awt/GridBagConstraints.html#ipadx)

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

### GridBagConstraints

public **GridBagConstraints**()

Creates a GridBagConstraint object with all of its fields set to their default value.

### GridBagConstraints

public **GridBagConstraints**(int gridx,  
 int gridy,  
 int gridwidth,  
 int gridheight,  
 double weightx,  
 double weighty,  
 int anchor,  
 int fill,  
 [Insets](http://docs.google.com/java/awt/Insets.html) insets,  
 int ipadx,  
 int ipady)

Creates a GridBagConstraints object with all of its fields set to the passed-in arguments. Note: Because the use of this constructor hinders readability of source code, this constructor should only be used by automatic source code generation tools.

**Parameters:**gridx - The initial gridx value.gridy - The initial gridy value.gridwidth - The initial gridwidth value.gridheight - The initial gridheight value.weightx - The initial weightx value.weighty - The initial weighty value.anchor - The initial anchor value.fill - The initial fill value.insets - The initial insets value.ipadx - The initial ipadx value.ipady - The initial ipady value.**Since:** 1.2 **See Also:**[gridx](http://docs.google.com/java/awt/GridBagConstraints.html#gridx), [gridy](http://docs.google.com/java/awt/GridBagConstraints.html#gridy), [gridwidth](http://docs.google.com/java/awt/GridBagConstraints.html#gridwidth), [gridheight](http://docs.google.com/java/awt/GridBagConstraints.html#gridheight), [weightx](http://docs.google.com/java/awt/GridBagConstraints.html#weightx), [weighty](http://docs.google.com/java/awt/GridBagConstraints.html#weighty), [anchor](http://docs.google.com/java/awt/GridBagConstraints.html#anchor), [fill](http://docs.google.com/java/awt/GridBagConstraints.html#fill), [insets](http://docs.google.com/java/awt/GridBagConstraints.html#insets), [ipadx](http://docs.google.com/java/awt/GridBagConstraints.html#ipadx), [ipady](http://docs.google.com/java/awt/GridBagConstraints.html#ipady)

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

### clone

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

Creates a copy of this grid bag constraint.

**Overrides:**[clone](http://docs.google.com/java/lang/Object.html#clone()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a copy of this grid bag constraint**See Also:**[Cloneable](http://docs.google.com/java/lang/Cloneable.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/GridBagConstraints.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/GraphicsEnvironment.html)   [**NEXT CLASS**](http://docs.google.com/java/awt/GridBagLayout.html) | [**FRAMES**](http://docs.google.com/index.html?java/awt/GridBagConstraints.html)    [**NO FRAMES**](http://docs.google.com/GridBagConstraints.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#2lwamvv) | [METHOD](#206ipza) |

[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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