| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/GroupLayout.ParallelGroup.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/swing/GroupLayout.Group.html)   [**NEXT CLASS**](http://docs.google.com/javax/swing/GroupLayout.SequentialGroup.html) | [**FRAMES**](http://docs.google.com/index.html?javax/swing/GroupLayout.ParallelGroup.html)    [**NO FRAMES**](http://docs.google.com/GroupLayout.ParallelGroup.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

## **javax.swing**

Class GroupLayout.ParallelGroup

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 [javax.swing.GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html)  
 **javax.swing.GroupLayout.ParallelGroup**

**Enclosing class:**[GroupLayout](http://docs.google.com/javax/swing/GroupLayout.html)

public class **GroupLayout.ParallelGroup**extends [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html)

A Group that aligns and sizes it's children. ParallelGroup aligns it's children in four possible ways: along the baseline, centered, anchored to the leading edge, or anchored to the trailing edge.

### Baseline

A ParallelGroup that aligns it's children along the baseline must first decide where the baseline is anchored. The baseline can either be anchored to the top, or anchored to the bottom of the group. That is, the distance between the baseline and the beginning of the group can be a constant distance, or the distance between the end of the group and the baseline can be a constant distance. The possible choices correspond to the BaselineResizeBehavior constants [CONSTANT\_ASCENT](http://docs.google.com/java/awt/Component.BaselineResizeBehavior.html#CONSTANT_ASCENT) and [CONSTANT\_DESCENT](http://docs.google.com/java/awt/Component.BaselineResizeBehavior.html#CONSTANT_DESCENT).

The baseline anchor may be explicitly specified by the createBaselineGroup method, or determined based on the elements. If not explicitly specified, the baseline will be anchored to the bottom if all the elements with a baseline, and that are aligned to the baseline, have a baseline resize behavior of CONSTANT\_DESCENT; otherwise the baseline is anchored to the top of the group.

Elements aligned to the baseline are resizable if they have have a baseline resize behavior of CONSTANT\_ASCENT or CONSTANT\_DESCENT. Elements with a baseline resize behavior of OTHER or CENTER\_OFFSET are not resizable.

The baseline is calculated based on the preferred height of each of the elements that have a baseline. The baseline is calculated using the following algorithm: max(maxNonBaselineHeight, maxAscent + maxDescent), where the maxNonBaselineHeight is the maximum height of all elements that do not have a baseline, or are not aligned along the baseline. maxAscent is the maximum ascent (baseline) of all elements that have a baseline and are aligned along the baseline. maxDescent is the maximum descent (preferred height - baseline) of all elements that have a baseline and are aligned along the baseline.

A ParallelGroup that aligns it's elements along the baseline is only useful along the vertical axis. If you create a baseline group and use it along the horizontal axis an IllegalStateException is thrown when you ask GroupLayout for the minimum, preferred or maximum size or attempt to layout the components.

Elements that are not aligned to the baseline and smaller than the size of the ParallelGroup are positioned in one of three ways: centered, anchored to the leading edge, or anchored to the trailing edge.

### Non-baseline ParallelGroup

ParallelGroups created with an alignment other than BASELINE align elements that are smaller than the size of the group in one of three ways: centered, anchored to the leading edge, or anchored to the trailing edge.

The leading edge is based on the axis and ComponentOrientation. For the vertical axis the top edge is always the leading edge, and the bottom edge is always the trailing edge. When the ComponentOrientation is LEFT\_TO\_RIGHT, the leading edge is the left edge and the trailing edge the right edge. A ComponentOrientation of RIGHT\_TO\_LEFT flips the left and right edges. Child elements are aligned based on the specified alignment the element was added with. If you do not specify an alignment, the alignment specified for the ParallelGroup is used.

To align elements along the baseline you createBaselineGroup, or createParallelGroup with an alignment of BASELINE. If the group was not created with a baseline alignment, and you attempt to add an element specifying a baseline alignment, an IllegalArgumentException is thrown.

**Since:** 1.6 **See Also:**[GroupLayout.createParallelGroup()](http://docs.google.com/javax/swing/GroupLayout.html#createParallelGroup()), [GroupLayout.createBaselineGroup(boolean,boolean)](http://docs.google.com/javax/swing/GroupLayout.html#createBaselineGroup(boolean,%20boolean))

| **Method Summary** | |
| --- | --- |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addComponent**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addComponent(java.awt.Component))([Component](http://docs.google.com/java/awt/Component.html) component)            Adds a Component to this Group. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addComponent**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addComponent(java.awt.Component,%20javax.swing.GroupLayout.Alignment))([Component](http://docs.google.com/java/awt/Component.html) component, [GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment)            Adds a Component to this ParallelGroup with the specified alignment. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addComponent**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addComponent(java.awt.Component,%20javax.swing.GroupLayout.Alignment,%20int,%20int,%20int))([Component](http://docs.google.com/java/awt/Component.html) component, [GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment, int min, int pref, int max)            Adds a Component to this ParallelGroup with the specified alignment and size. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addComponent**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addComponent(java.awt.Component,%20int,%20int,%20int))([Component](http://docs.google.com/java/awt/Component.html) component, int min, int pref, int max)            Adds a Component to this Group with the specified size. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addGap**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addGap(int))(int pref)            Adds a rigid gap to this Group. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addGap**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addGap(int,%20int,%20int))(int min, int pref, int max)            Adds a gap to this Group with the specified size. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addGroup**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addGroup(javax.swing.GroupLayout.Alignment,%20javax.swing.GroupLayout.Group))([GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment, [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) group)            Adds a Group to this ParallelGroup with the specified alignment. |
| [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) | [**addGroup**](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html#addGroup(javax.swing.GroupLayout.Group))([GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) group)            Adds a Group to this Group. |

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

| **Method Detail** |
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### addGroup

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addGroup**([GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) group)

Adds a Group to this Group.

**Overrides:**[addGroup](http://docs.google.com/javax/swing/GroupLayout.Group.html#addGroup(javax.swing.GroupLayout.Group)) in class [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) **Parameters:**group - the Group to add **Returns:**this Group

### addComponent

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addComponent**([Component](http://docs.google.com/java/awt/Component.html) component)

Adds a Component to this Group.

**Overrides:**[addComponent](http://docs.google.com/javax/swing/GroupLayout.Group.html#addComponent(java.awt.Component)) in class [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) **Parameters:**component - the Component to add **Returns:**this Group

### addComponent

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addComponent**([Component](http://docs.google.com/java/awt/Component.html) component,  
 int min,  
 int pref,  
 int max)

Adds a Component to this Group with the specified size.

**Overrides:**[addComponent](http://docs.google.com/javax/swing/GroupLayout.Group.html#addComponent(java.awt.Component,%20int,%20int,%20int)) in class [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) **Parameters:**component - the Component to addmin - the minimum size or one of DEFAULT\_SIZE or PREFERRED\_SIZEpref - the preferred size or one of DEFAULT\_SIZE or PREFERRED\_SIZEmax - the maximum size or one of DEFAULT\_SIZE or PREFERRED\_SIZE **Returns:**this Group

### addGap

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addGap**(int pref)

Adds a rigid gap to this Group.

**Overrides:**[addGap](http://docs.google.com/javax/swing/GroupLayout.Group.html#addGap(int)) in class [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) **Parameters:**pref - the size of the gap **Returns:**this Group

### addGap

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addGap**(int min,  
 int pref,  
 int max)

Adds a gap to this Group with the specified size.

**Overrides:**[addGap](http://docs.google.com/javax/swing/GroupLayout.Group.html#addGap(int,%20int,%20int)) in class [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) **Parameters:**min - the minimum size of the gappref - the preferred size of the gapmax - the maximum size of the gap **Returns:**this Group

### addGroup

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addGroup**([GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment,  
 [GroupLayout.Group](http://docs.google.com/javax/swing/GroupLayout.Group.html) group)

Adds a Group to this ParallelGroup with the specified alignment. If the child is smaller than the Group it is aligned based on the specified alignment.

**Parameters:**alignment - the alignmentgroup - the Group to add **Returns:**this ParallelGroup **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if alignment is null

### addComponent

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addComponent**([Component](http://docs.google.com/java/awt/Component.html) component,  
 [GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment)

Adds a Component to this ParallelGroup with the specified alignment.

**Parameters:**alignment - the alignmentcomponent - the Component to add **Returns:**this Group **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if alignment is null

### addComponent

public [GroupLayout.ParallelGroup](http://docs.google.com/javax/swing/GroupLayout.ParallelGroup.html) **addComponent**([Component](http://docs.google.com/java/awt/Component.html) component,  
 [GroupLayout.Alignment](http://docs.google.com/javax/swing/GroupLayout.Alignment.html) alignment,  
 int min,  
 int pref,  
 int max)

Adds a Component to this ParallelGroup with the specified alignment and size.

**Parameters:**alignment - the alignmentcomponent - the Component to addmin - the minimum sizepref - the preferred sizemax - the maximum size **Returns:**this Group **Throws:** [IllegalArgumentException](http://docs.google.com/java/lang/IllegalArgumentException.html) - if alignment is null

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/GroupLayout.ParallelGroup.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/swing/GroupLayout.Group.html)   [**NEXT CLASS**](http://docs.google.com/javax/swing/GroupLayout.SequentialGroup.html) | [**FRAMES**](http://docs.google.com/index.html?javax/swing/GroupLayout.ParallelGroup.html)    [**NO FRAMES**](http://docs.google.com/GroupLayout.ParallelGroup.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#tyjcwt) |

[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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