

Class `java.awt.Container`

```
java.lang.Object
|
+----java.awt.Component
|
+----java.awt.Container
```

public class **Container**
extends [Component](#)

A generic Abstract Window Toolkit(AWT) container object is a component that can contain other AWT components.

Version:

1.30, 08/17/95

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- o **setLayout(LayoutManager)**
Sets the layout manager for this container.
- o **validate()**
Validates this Container and all of the components contained within it.

Methods

o **countComponents**

```
public int countComponents()
```

Returns the number of components in this panel.

See Also:

[getComponent](#)

o **getComponent**

```
public synchronized Component getComponent(int n)
```

Gets the nth component in this container.

Parameters:

n – the number of the component to get

Throws: [ArrayIndexOutOfBoundsException](#)

If the nth value does not exist.

o **getComponents**

```
public synchronized Component[] getComponents()
```

Gets all the components in this container.

o insets

```
public Insets insets()
```

Returns the insets of the container. The insets indicate the size of the border of the container. A Frame, for example, will have a top inset that corresponds with the height of the Frame's title bar.

See Also:

LayoutManager

o add

```
public synchronized Component add(Component comp)
```

Adds the specified component to this container.

Parameters:

comp – the component to be added

See Also:

remove

o add

```
public synchronized Component add(String name,  
                                     Component comp)
```

Adds the specified component to this container. The component is also added to the layout manager of this container using the name.

Parameters:

name – the component name

comp – the component to be added

See Also:

remove, LayoutManager

o remove

```
public synchronized void remove(Component comp)
```

Removes the specified component from this container.

Parameters:

comp – the component to be removed

See Also:

add

o removeAll

```
public synchronized void removeAll()
```

Removes all the components from this container.

See Also:

add, remove

o **getLayout**

```
public LayoutManager getLayout()
```

Gets the layout manager for this container.

See Also:

layout, setLayout

o **setLayout**

```
public void setLayout(LayoutManager mgr)
```

Sets the layout manager for this container.

Parameters:

mgr – the specified layout manager

See Also:

layout, getLayout

o **layout**

```
public synchronized void layout()
```

Does a layout on this Container.

Overrides:

layout in class Component

See Also:

setLayout

o **validate**

```
public synchronized void validate()
```

Validates this Container and all of the components contained within it.

Overrides:

validate in class Component

See Also:

validate, invalidate

o **preferredSize**

```
public synchronized Dimension preferredSize()
```

Returns the preferred size of this container.

Overrides:

preferredSize in class Component

See Also:

minimumSize

o minimumSize

```
public synchronized Dimension minimumSize()
```

Returns the minimum size of this container.

Overrides:

minimumSize in class Component

See Also:

preferredSize

o paintComponents

```
public void paintComponents(Graphics g)
```

Paints the components in this container.

Parameters:

g – the specified Graphics window

See Also:

paint, paintAll

o printComponents

```
public void printComponents(Graphics g)
```

Prints the components in this container.

Parameters:

g – the specified Graphics window

See Also:

print, printAll

o deliverEvent

```
public void deliverEvent(Event e)
```

Delivers an event. The appropriate component is located and the event is delivered to it.

Parameters:

e – the event

Overrides:

deliverEvent in class Component

See Also:

handleEvent, postEvent

o locate

```
public Component locate(int x,  
                        int y)
```

Locates the component that contains the x,y position.

Parameters:

x – the x coordinate

y – the y coordinate

Returns:

null if the component is not within the x and y coordinates; returns the component otherwise.

Overrides:

locate in class Component

See Also:

inside

o addNotify

```
public synchronized void addNotify()
```

Notifies the container to create a peer. It will also notify the components contained in this container.

Overrides:

addNotify in class Component

See Also:

removeNotify

o removeNotify

```
public synchronized void removeNotify()
```

Notifies the container to remove its peer. It will also notify the components contained in this container.

Overrides:

removeNotify in class Component

See Also:

addNotify

o paramString

```
protected String paramString()
```

Returns the parameter String of this Container.

Overrides:

paramString in class Component

o list

```
public void list(PrintStream out,  
               int indent)
```

Prints out a list, starting at the specified indentation, to the specified out stream.

Parameters:

out – the Stream name

indent – the start of the list

Overrides:

list in class Component

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