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
Author:
Arthur van Hoff, Sami Shaio

Method Index

o **add**(Component)
Adds the specified component to this container.
o **add**(String, Component)
Adds the specified component to this container.
o **addNotify**()
Notifies the container to create a peer.
o **countComponents**()
Returns the number of components in this panel.
o **deliverEvent**(Event)
Delivers an event.
o **getComponent**(int)
Gets the nth component in this container.
o **getComponents**()
Gets all the components in this container.
o **getLayout**()
Gets the layout manager for this container.
o **insets**()
Returns the insets of the container.

- **layout**()
  Does a layout on this Container.
- **list**(PrintStream, int)
  Prints out a list, starting at the specified indention, to the specified out stream.
- **locate**(int, int)
  Locates the component that contains the x,y position.
- **minimumSize**()
  Returns the minimum size of this container.
- **paintComponents**(Graphics)
  Paints the components in this container.
- **paramString**()
  Returns the parameter String of this Container.
- **preferredSize**()
  Returns the preferred size of this container.
- **printComponents**(Graphics)
  Prints the components in this container.
- **remove**(Component)
  Removes the specified component from this container.
- **removeAll**()
  Removes all the components from this container.
- **removeNotify**()
  Notifies the container to remove its peer.
- **setLayout**(LayoutManager)
  Sets the layout manager for this container.
- **validate**()
  Validates this Container and all of the components contained within it.

Methods

- **countComponents**

```
public int countComponents()
```

  Returns the number of components in this panel.
  See Also:
    getComponent

- **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.

- **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 indention, to the specified out stream.

Parameters:

out – the Stream name
indent – the start of the list

Overrides:

list in class Component