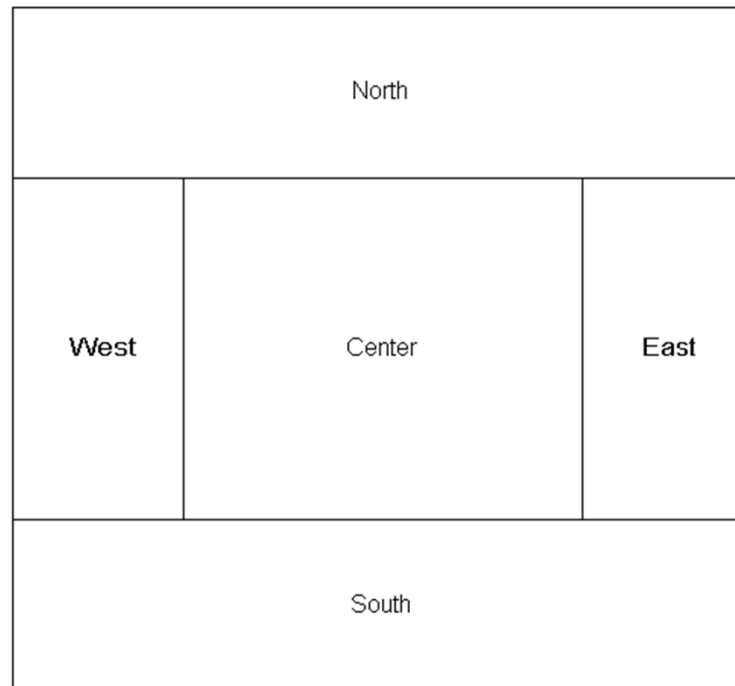




Layouts – BorderLayout

So far we have looked at Layouts whose Components positioning depends on the order in which they are added to the Panel, a BorderLayout contains five zones which relate to the five points of a compass, North, South, East, West and Center ...





Layouts – BorderLayout

It is essential that the Developer specifies the position of the Component when adding it to the Panel, the default position is the "Center" zone and obviously only one Component can occupy that, and that will be the one added last to it !

The Developer should also import the following ...

```
import java.awt.BorderLayout;
```

Layouts – BorderLayout



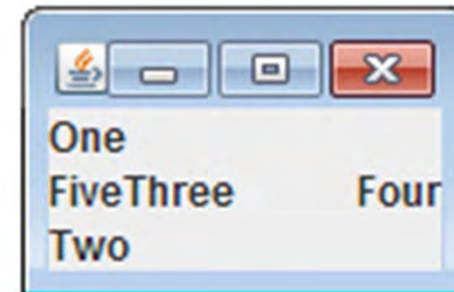
```
import java.awt.BorderLayout;  
import javax.swing.*;
```

```
public class BorderLayout1 {
```

```
    static JLabel msg1 = new JLabel("One"); // Repeated for five JLabels  
    static JFrame newframe = new JFrame("BorderLayout");  
    static JPanel pane1 = new JPanel();  
    static BorderLayout border1 = new BorderLayout();
```

```
    public static void main(String[] arguments)  
    {
```

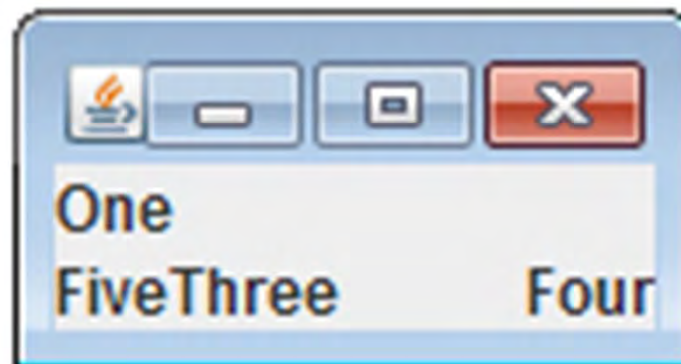
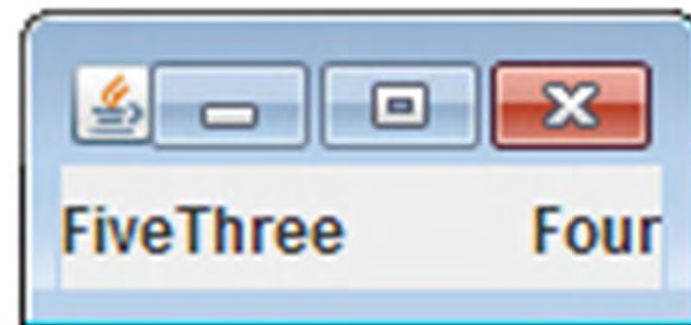
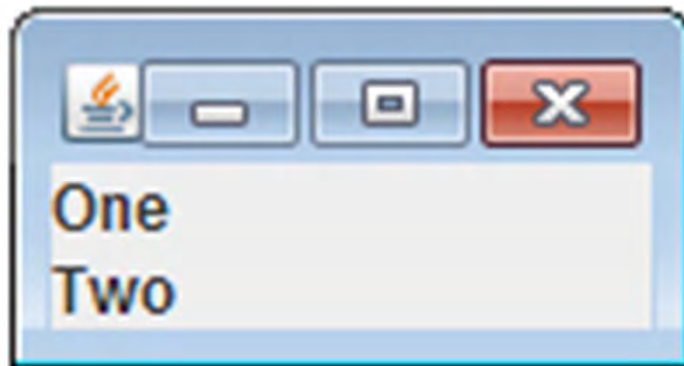
```
        pane1.setLayout(border1);  
        pane1.add("North", msg1); // Note the double quotes around the location  
        pane1.add("South", msg2);  
        pane1.add("Center", msg3); // American spelling of centre  
        pane1.add("East", msg4);  
        pane1.add("West", msg5); // These have been added in no particular order
```





Layouts – BorderLayout

There is no mandatory zone, therefore the Developer can use as many or as few as is necessary ...



Layouts – BorderLayout



Two arguments can be passed to a Border Layout, the horizontal and vertical gaps.

```
BorderLayout border1 = new BorderLayout(120,20);
```



Layouts – Defining BorderLayouts since Java 1.4



BorderLayout usage was totally changed since 1.4 in that a new more efficient method of defining is now in place, the usage of 'compass' zones first has now been replaced by 'constants' placed second ...

```
panel.add(msg3, BorderLayout.CENTER);  
panel.add(msg1, BorderLayout.NORTH);  
panel.add(msg2, BorderLayout.SOUTH);  
panel.add(msg4, BorderLayout.EAST);  
panel.add(msg5, BorderLayout.WEST);
```

Developers are now encouraged to use the following zone definitions

...

```
panel.add(msg3, BorderLayout.CENTER);  
panel.add(msg1, BorderLayout.PAGE_START);  
panel.add(msg2, BorderLayout.PAGE_END);  
panel.add(msg4, BorderLayout.LINE_END);  
panel.add(msg5, BorderLayout.LINE_START);
```

Layouts – Defining BorderLayouts since Java 1.4

