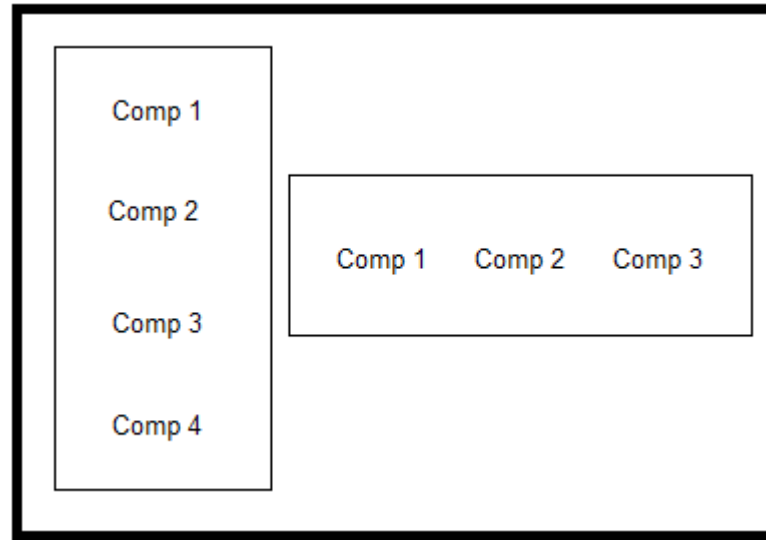


5. GUI Programming :: Java Layout Managers :: *BoxLayout*

The *javax.swing.BoxLayout* layout manager lays out components horizontally or vertically in a box:



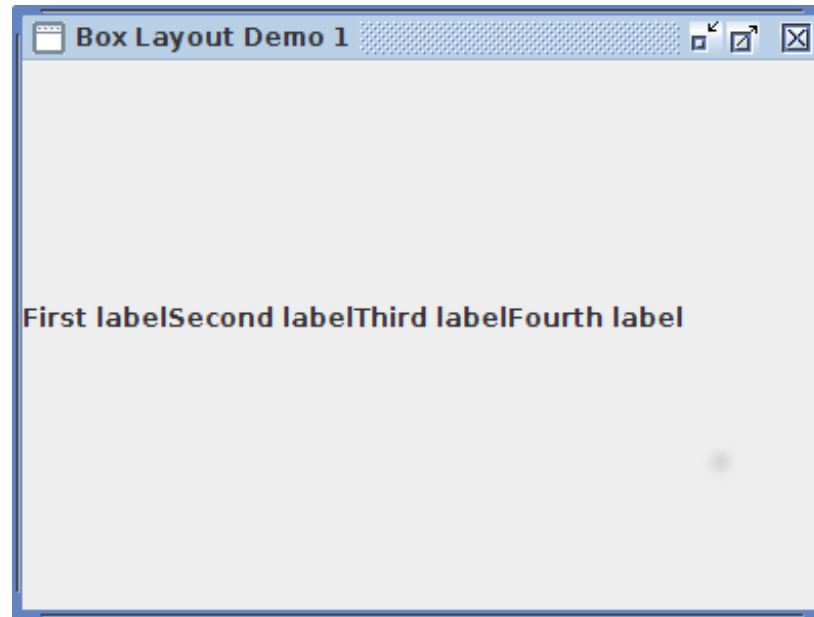
Components do not wrap, so a vertical stack of components will remain stacked vertically when the *JFrame* is resized. Horizontal or vertical arrangement is specified with a constructor argument of *BoxLayout.X_AXIS* or *BoxLayout.Y_AXIS*, respectively.

```
JPanel panel = new JPanel();  
BoxLayout boxLayoutHoriz = new BoxLayout(panel, BoxLayout.X_AXIS);  
BoxLayout boxLayoutVert  = new BoxLayout(panel, BoxLayout.Y_AXIS);
```

5. GUI Programming :: Java Layout Managers :: *BoxLayout* Demo 1

```
// BoxLayoutDemo1 .java
import javax.swing.BoxLayout;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JPanel;
public class BoxLayoutDemo1 {
    public static void main(String[] args) { new BoxLayoutDemo1().run(); }
    public void run() {
        JFrame.setDefaultLookAndFeelDecorated(true);
        JPanel panel = new JPanel();
        panel.setLayout(new BoxLayout(panel, BoxLayout.X_AXIS));
        addLabel(panel, "First label");
        addLabel(panel, "Second label");
        addLabel(panel, "Third label");
        addLabel(panel, "Fourth label");
        JFrame frame = new JFrame("Box Layout Demo 1");
        frame.setSize(400, 300);
        frame.add(panel);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);
    }
    private void addLabel(JPanel pPanel, String pText) {
        JLabel label = new JLabel(pText);
        pPanel.add(label);
    }
}
```

5. GUI Programming :: Java Layout Managers :: *BoxLayout* Demo 1 (continued)



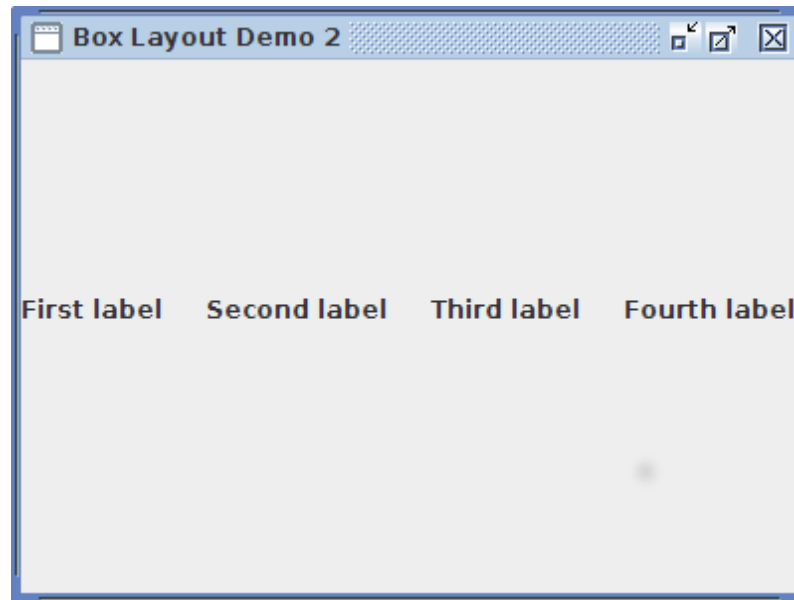
5. GUI Programming :: Java Layout Managers :: *BoxLayout* Demo 2

Notice that there is no space between the *JLabels*. We can create space using the *Box.createHorizontalGlue()* method and adding "glue" to the *JPanel* in between each *JLabel*:

```
// BoxLayoutDemo2.java
import javax.swing.Box;
...

public class BoxLayoutDemo2 {
    public static void main(String[] args) { new BoxLayoutDemo2().run(); }
    public void run() {
        ...
        JPanel panel = new JPanel();
        panel.setLayout(new BoxLayout(panel, BoxLayout.X_AXIS));
        addLabel(panel, "First label", true);
        addLabel(panel, "Second label", true);
        addLabel(panel, "Third label", true);
        addLabel(panel, "Fourth label", false);
        ...
    }
    private void addLabel(JPanel pPanel, String pText, boolean pGlue) {
        JLabel label = new JLabel(pText);
        pPanel.add(label);
        if (pGlue) pPanel.add(Box.createHorizontalGlue());
    }
}
```

5. GUI Programming :: Java Layout Managers :: *BoxLayout* Demo 2 (continued)



Think of glue as a stretchy elastic substance that is stretched as needed to specify where excess space in the *BoxLayout* should go. We added glue in between each pair of *JLabels* so now the *JLabels* are neatly aligned within the horizontal box.