
LAB 11

Program to illustrate Layout Manager

OBJECTIVE:

The objective of the following program is to illustrate various layout manager operations:

```
package com.company;
import org.w3c.dom.Text;

import javax.swing.*;
import java.util.Scanner;
import java.awt.*;
import java.awt.event.*;

class flowLayout extends Frame{
    Button b1, b2, b3, b4, b5, b6, b7, b8, b9, b10;
    public flowLayout(){
        super("Flow Layout Demo");
        b1=new Button("One");
        b2=new Button("Two");
        b3=new Button("Three");
        b4=new Button("Four");
        b5=new Button("Five");
        b6=new Button("Six");
        b7=new Button("Seven");
        b8=new Button("Eight");
        b9=new Button("Nine");
        b10=new Button("Ten");
        FlowLayout fl=new FlowLayout();
        fl.setAlignment(FlowLayout.CENTER);
        fl.setHgap(50);
        setLayout(fl);
        add(b1);
        add(b2);
        add(b3);
        add(b4);
        add(b5);
        add(b6);
        add(b7);
        add(b8);
        add(b9);
        add(b10);
    }
}

class BorderLayout extends Frame{
    Button b1, b2, b3, b4, b5, b6, b7, b8, b9, b10;
```

```

public BorderLayout() {
    super("Border Layout Demo");
    b1=new Button("One");
    b2=new Button("Two");
    b3=new Button("Three");
    b4=new Button("Four");
    b5=new Button("Five");
    b6=new Button("Mon");
    b7=new Button("Tue");
    b8=new Button("Wed");
    b9=new Button("Thru");
    b10=new Button("Fri");
    add(b2, BorderLayout.WEST);
    add(b3, BorderLayout.EAST);
    add(b4, BorderLayout.NORTH);
    add(b5, BorderLayout.SOUTH);
    Panel p=new Panel(new GridLayout());
    p.add(b6);
    p.add(b7);
    p.add(b8);
    p.add(b9);
    p.add(b10);
    add(p, BorderLayout.CENTER);
}
}

class GridLayout extends Frame{
    Button b1, b2, b3, b4, b5, b6, b7, b8, b9, b10;
    public GridLayout() {
        super("Grid Layout Demo");
        b1=new Button("One");
        b2=new Button("Two");
        b3=new Button("Three");
        b4=new Button("Four");
        b5=new Button("Five");
        b6=new Button("Six");
        b7=new Button("Seven");
        b8=new Button("Eight");
        b9=new Button("Nine");
        b10=new Button("Ten");
        GridLayout gl=new GridLayout(4, 3);
        setLayout(gl);
        add(b1);
        add(b2);
        add(b3);
        add(b4);
        add(b5);
        add(b6);
        add(b7);
        add(b8);
        add(b9);
        add(b10);
    }
}

class GridBagLayout extends Frame{
    Button b1, b2, b3, b4, b5, b6, b7, b8, b9, b10;
    public GridBagLayout() {
        super("GridBag Layout Demo");

```

```

        b1=new Button("One");
        b2=new Button("Two");
        b3=new Button("Three");
        b4=new Button("Four");
        b5=new Button("Five");
        b6=new Button("Six");
        GridBagLayout gb=new GridBagLayout();
        GridBagConstraints gbc=new GridBagConstraints();
        setLayout(gb);
        gbc.gridx=1;
        gbc.gridy=1;
        add(b1, gbc);
        gbc.gridx=2;
        gbc.gridy=2;
        add(b2, gbc);
        gbc.gridx=3;
        gbc.gridy=3;
        add(b3, gbc);
        gbc.gridx=4;
        gbc.gridy=4;
        add(b4, gbc);
        gbc.gridx=5;
        gbc.gridy=5;
        add(b5, gbc);
        gbc.gridx=6;
        gbc.gridy=6;
        add(b6, gbc);
    }
}

class cardLayout extends Frame {
    JFrame frame = new JFrame("CardLayout demo");
    JPanel panelCont = new JPanel();
    JPanel panelFirst = new JPanel();
    JPanel panelSecond = new JPanel();
    JButton buttonOne = new JButton("Switch to second panel/workspace");
    JButton buttonSecond = new JButton("Switch to first panel/workspace");
    CardLayout cl = new CardLayout();

    public cardLayout() {
        panelCont.setLayout(cl);
        panelFirst.add(buttonOne);
        panelSecond.add(buttonSecond);
        panelFirst.setBackground(Color.BLUE);
        panelSecond.setBackground(Color.GREEN);

        panelCont.add(panelFirst, "1");
        panelCont.add(panelSecond, "2");
        cl.show(panelCont, "1");

        buttonOne.addActionListener(new ActionListener() {
            @Override
            public void actionPerformed(ActionEvent arg0) {
                cl.show(panelCont, "2");
            }
        });

        buttonSecond.addActionListener(new ActionListener() {
            @Override

```

```

        public void actionPerformed(ActionEvent arg0) {
            cl.show(panelCont, "1");
        }
    });
    frame.add(panelCont);
    frame.setDefaultCloseOperation(JFrame.DISPOSE_ON_CLOSE);
    frame.pack();
    frame.setVisible(true);
}

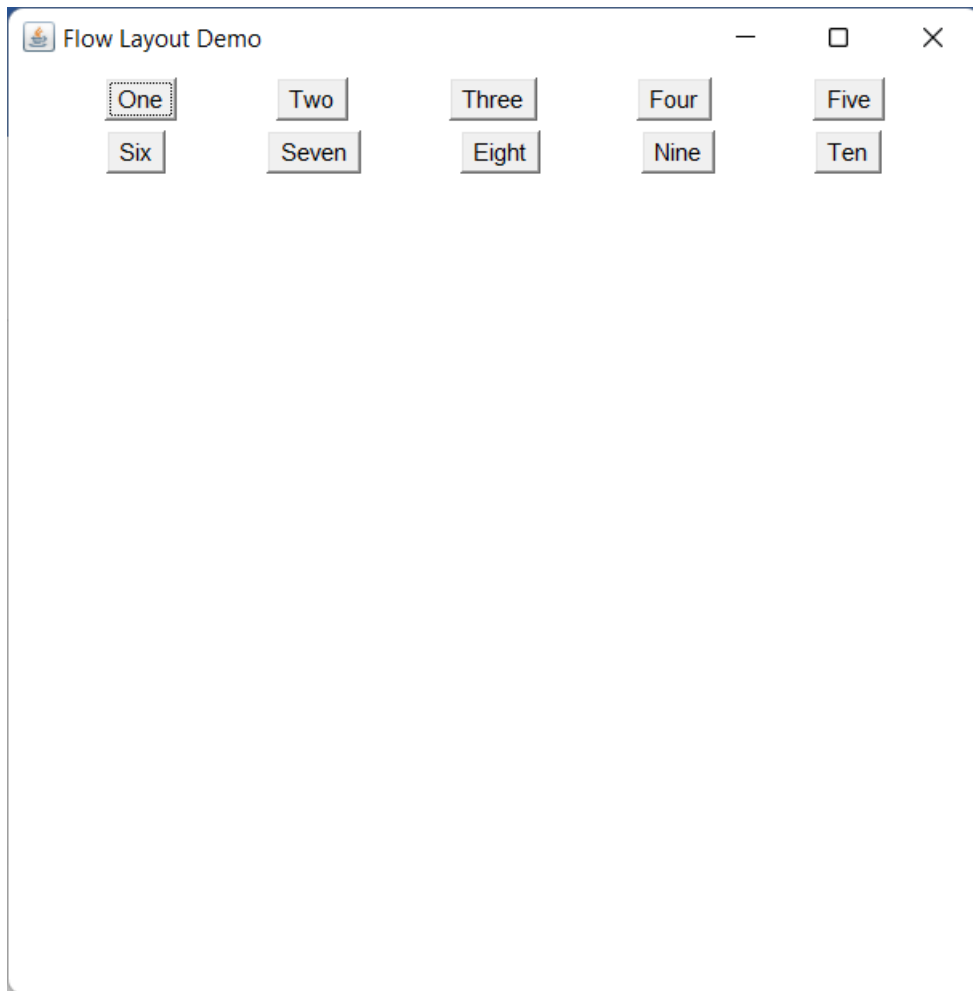
}

public class layoutManager {
    public static void main(String[] args) {
        flowLayout f = new flowLayout();
        f.setSize(500, 500);
        f.setVisible(true);
        BorderLayout b = new BorderLayout();
        b.setSize(500, 500);
        b.setVisible(true);
        GridLayout g = new GridLayout();
        g.setSize(500, 500);
        g.setVisible(true);
        GridBagLayout gb = new GridBagLayout();
        gb.setSize(500, 500);
        gb.setVisible(true);
        CardLayout cd = new CardLayout();
    }
}

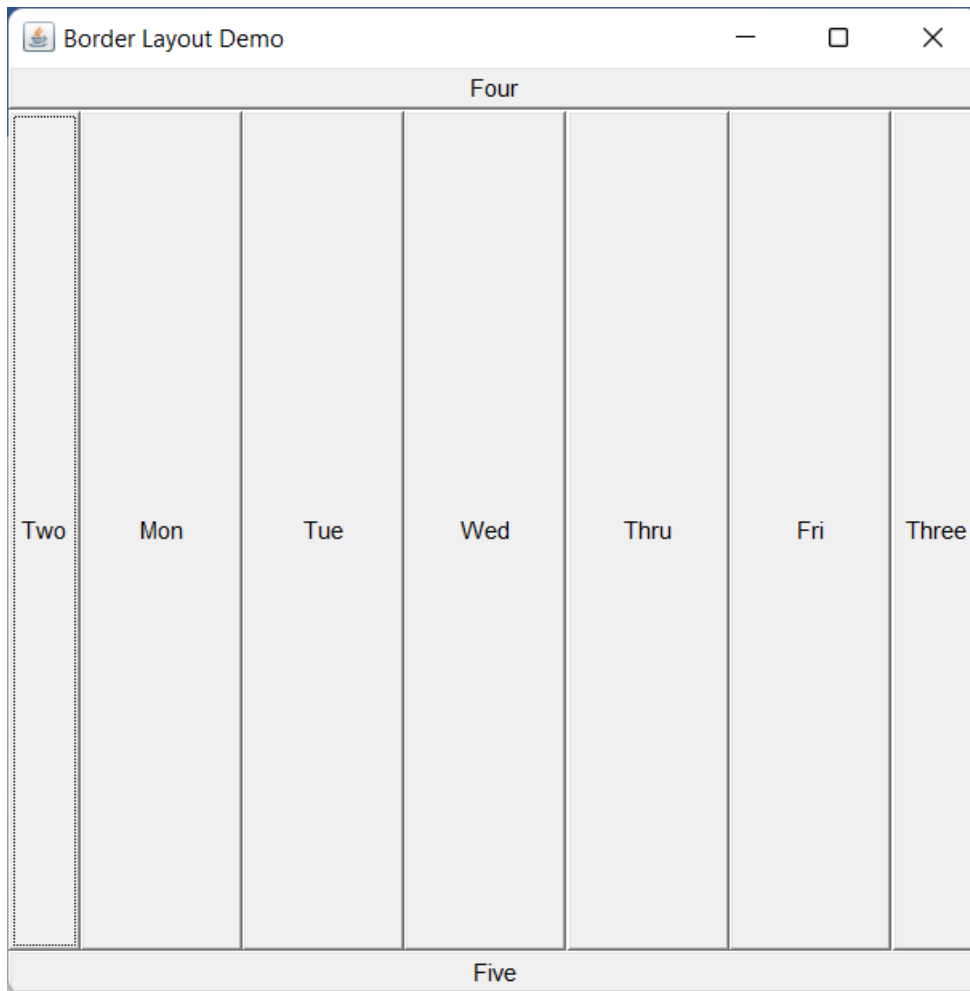
```

OUTPUT :

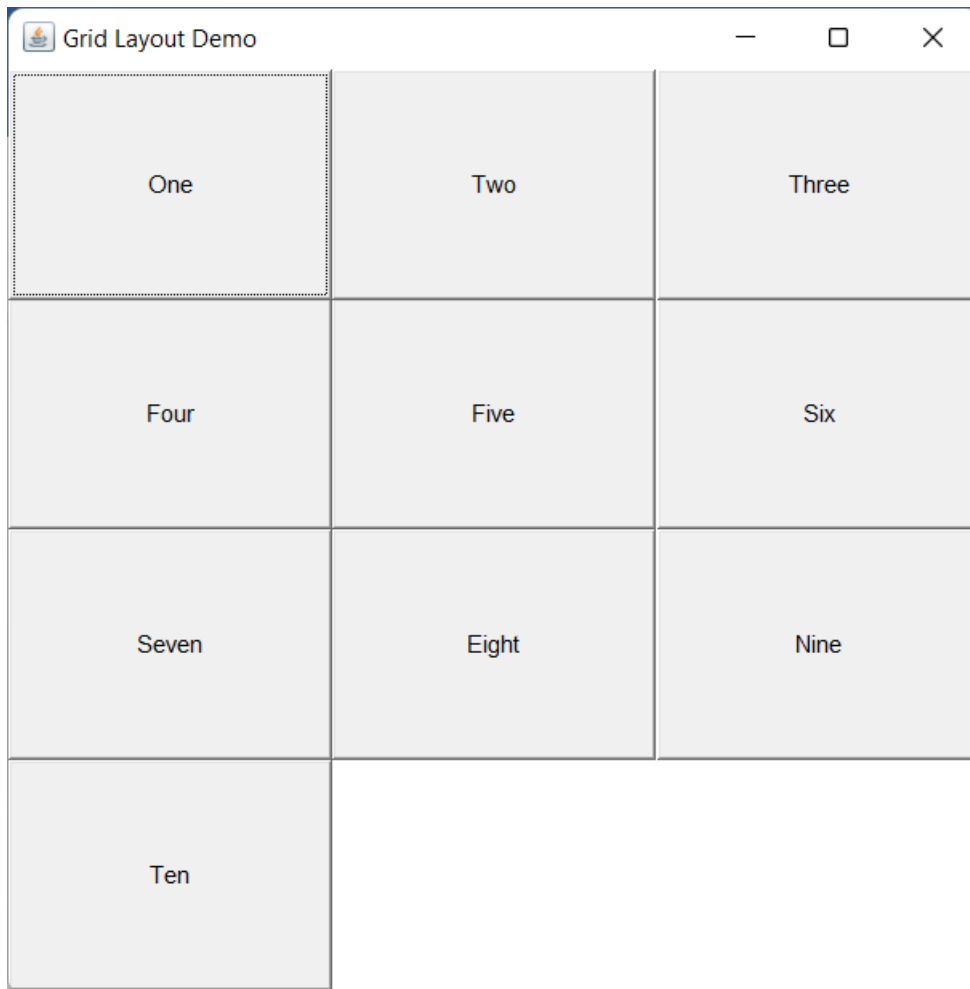
1. Flow Layout :



2. Border Layout(With a Panel in Centre) :



3. Grid Layout :



4. GridBag Layout :



5. Card Layout :

