

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

public class DisplayGraphics extends JFrame {

    DisplayGraphics(){
        setSize(400,400);
        setLayout(null);
        setVisible(true);}

    public void paint(Graphics g) {
        g.drawString("Hello",40,40);
        setBackground(Color.WHITE);
        g.fillRect(130, 30,100, 80);
        g.drawOval(30,130,50, 60);
        setForeground(Color.RED);
        g.fillOval(130,130,50, 60);
        g.drawArc(30, 200, 40,50,90,60);
        g.fillArc(30, 130, 40,50,180,40);

    }

    public static void main(String[] args) {
        // DisplayGraphics m=new DisplayGraphics();
        new DisplayGraphics() ;

        // m.setSize(400,400);
        // m.setLayout(null);
        //m.setVisible(true);
```

```
}
```

```
}
```

2.

```
import java.awt.event.*;
```

```
import java.awt.*;
```

```
public class GraphicsDemo extends Frame {
```

```
    public GraphicsDemo(){
```

```
        setSize(new Dimension(400,800));
```

```
        setVisible(true);
```

```
        addWindowListener(new WindowAdapter(){
```

```
            public void windowClosing(WindowEvent e) {
```

```
                dispose();
```

```
            }
```

```
        });
```

```
    }
```

```
    public void paint(Graphics g){
```

```
        setBackground(Color.yellow);
```

```
        //lines
```

```
        g.drawLine(20,40,100,90);
```

```
        setForeground(Color.blue);
```

```
        g.drawLine(20,90,100,40);
```

```
        //setForeground(Color.red);
```

```
g.setColor(Color.green);  
g.drawLine(40,45,250,80);
```

```
// Draw Rectangles
```

```
g.setColor(Color.red);  
g.drawRect(20,150,60,150);
```

```
g.fillRect(110,150,60,50);  
g.drawRoundRect(200,150,60,50, 15,15);  
g.fillRoundRect(290,150,60,50,30,40);
```

```
// Draw ellipses and circles
```

```
g.drawOval(20,250,50,50);  
g.fillOval(100,250,75,50);  
g.drawOval(200,260,100,40);
```

```
// Draw arc
```

```
g.drawArc(20,350,70,70,0,-180);  
g.fillArc(70,350,70,70,0,75);
```

```
//Draw polygon
```

```
int xpoints[]={20,200,20,200,20};  
int ypoints[]={450,450,650,650,450};  
int num =5;  
g.drawPolygon(xpoints, ypoints,num);  
}
```

```
public static void main(String args[]){  
    new GraphicsDemo();
```

```
}  
}
```

3.

```
import javax.swing.*;
```

```
import java.awt.*;
```

```
class JTextFieldExample extends JFrame
```

```
{
```

```
    JTextFieldExample()
```

```
{
```

```
    setLayout(new FlowLayout());
```

```
    JLabel lblRollno = new JLabel("Rollno : ");
```

```
    JTextField txtRollno = new JTextField(5);
```

```
    JLabel lblName = new JLabel("Name :");
```

```
    JTextField txtName = new JTextField("xyz",15);
```

```
    add(lblRollno); add(txtRollno);
```

```
    add(lblName); add(txtName);
```

```
}
```

```
}
```

```
class JTextFieldJavaExample
```

```
{
```

```
    public static void main(String args[])
```

```
{
```

```
    JTextFieldExample frame = new JTextFieldExample();
```

```
    frame.setTitle("JTextField in Java Swing Example");
```

```
    frame.setBounds(200,250,150,150);
```

```
    frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        frame.setVisible(true);
    }
}
```

4.

```
import java.awt.*;
```

```
import java.awt.event.*;
```

```
public class MouseEventDemo extends Frame implements MouseListener, MouseMotionListener{
```

```
    String msg = " ";
```

```
    String msg1 = "You are in mouse demo";
```

```
    int mousex=0, mousey=0;
```

```
    public MouseEventDemo(){
```

```
        addMouseListener(this);
```

```
        addMouseMotionListener(this);
```

```
        addWindowListener(new WindowAdapter(){
```

```
            public void windowClosing(WindowEvent e) {
```

```
                dispose();
```

```
            }
```

```
        });
```

```
        setSize(300,300);
```

```
        setVisible(true);
```

```
    }
```

```
    public void mouseClicked (MouseEvent me){
```

```
        msg1="You are in mouse clicked";
```

```
        msg="-- click received";
```

```
        repaint();
```

```
}
```

```
public void mouseEntered (MouseEvent me){  
    msg1="You are in mouse entered";  
    mousex=100; mousey=100;  
    msg="mouse entered";  
    repaint();  
}
```

```
public void mouseExited (MouseEvent me){  
    msg1="You are in mouse exited";  
    mousex=100; mousey=100;  
    msg="mouse exited";  
    repaint();  
}
```

```
public void mousePressed (MouseEvent me){  
    msg1="You are in mouse pressed";  
    mousex=me.getX(); mousey=me.getY();  
    msg="mouse press";  
    repaint();  
}
```

```
public void mouseReleased (MouseEvent me){  
    msg1="You are in mouse Released";  
    mousex=me.getX(); mousey=me.getY();  
    msg="mouse Release";  
    repaint();  
}
```

```
public void mouseDragged (MouseEvent me){  
    msg1="You are in mouse Dragged";
```

```

        mousex=me.getX(); mousey=me.getY();

        msg="mouse at" + mousex + "," + mousey;

        repaint();
    }

    public void mouseMoved (MouseEvent me){
        msg1="You are in mouse moved";

        mousex=me.getX(); mousey=me.getY();

        msg="mouse move at" + mousex + "," + mousey;

        repaint();
    }

    public void paint( Graphics g){
        g.drawString(msg1,50,50);

        g.drawString(msg,mousex,mousey);
    }

    public static void main (String args[]){
        new MouseEventDemo();

    }
}

```

5.

```

import java.awt.*;

import java.awt.event.*;

import javax.swing.*;

import java.util.*;

class PaintPanel extends JPanel{

    Insets ins;

    Random rand;

```

```

PaintPanel(){
    setBorder(BorderFactory.createLineBorder(Color.RED,5));
    rand = new Random();
    }
protected void paintComponent (Graphics g){
    super.paintComponent(g);
    int x,y,x2,y2;

    int height = getHeight();
    int width = getWidth();

    ins = getInsets();

    for(int i=0;i<10;i++){
        // x=rand.nextInt(width-ins.left);
        //y=rand.nextInt(height-ins.bottom);
        //x2=rand.nextInt(width-ins.left);
        //y2=rand.nextInt(height-ins.bottom);
        // setForeground(Color.red);
        x=rand.nextInt(width);
        y=rand.nextInt(height);
        x2=rand.nextInt(width);
        y2=rand.nextInt(height);
        System.out.print("x=" +x);
        System.out.print(", y=" +y);
        System.out.print(", x2=" +x2);
        System.out.println(", y2=" +y2);
    }
}

```

```
        g.drawLine(x,y,x2,y2);
    }
}
}
```

```
class PaintDemo{

    JLabel jlab;
    PaintPanel pp;

    PaintDemo(){
        JFrame jfrm=new JFrame("Paint Demo");
        jfrm.setSize(300,300);

        jfrm.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

        pp=new PaintPanel();

        jfrm.add(pp);
        jfrm.setVisible(true);
    }

    public static void main(String args[]){
        new PaintDemo();
    }
}
```

6.

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

```
public class SmileyApp extends JPanel {

    protected void paintComponent(Graphics g) {
        super.paintComponent(g);
        g.setColor(Color.YELLOW);
        g.fillOval(30, 30, 200, 200);
        // draw Eyes
        g.setColor(Color.BLACK);
        g.fillOval(55, 65, 30, 30);
        g.fillOval(135, 65, 30, 30);
        // draw Mouth
        g.fillOval(50, 110, 120, 60);
        // adding smile
        g.setColor(Color.YELLOW);
        g.fillRect(50, 110, 120, 30);
        g.fillOval(50, 120, 120, 40);
    }

    public static void main(String[] args) {
        SmileyApp smiley = new SmileyApp();
        JFrame app = new JFrame("Smiley App");
        app.add(smiley, BorderLayout.CENTER);
        app.setSize(300, 300);
        //app.setLocationRelativeTo(null);
        app.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        app.setVisible(true);
    }
}
```