➤ Primitive

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

public class ShapeTest extends JFrame{
    public ShapeTest(){
        setSize(400,400);
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        setLocationRelativeTo(null);
        setVisible(true);
    }

    public static void main(String a[]){
       new ShapeTest();
    }

    public void paint(Graphics g){
        g.drawOval(40, 40, 60, 60); //FOR CIRCLE
        g.drawRect(80, 30, 200, 200); // FOR SQUARE
        g.drawRect(200, 100, 100, 200); // FOR RECT
        raphics.drawPolygon(new int[] {10, 20, 30}, new int[] {100, 20, 100}, 3); //TRIANGLE
    }
}
```

➤ RadioButton

```
import javax.swing.*;
public class RadioButtonExample {
JFrame f;
RadioButtonExample(){
f=new JFrame();
JRadioButton r1=new JRadioButton("A) Male");
JRadioButton r2=new JRadioButton("B) Female");
r1.setBounds(75,50,100,30);
r2.setBounds(75,100,100,30);
ButtonGroup bg=new ButtonGroup();
bg.add(r1);bg.add(r2);
f.add(r1);f.add(r2);
f.setSize(300,300);
f.setLayout(null);
f.setVisible(true);
}
public static void main(String[] args) {
    new RadioButtonExample();
}
}
```

➤ Button

```
import javax.swing.*;
public class ComponentsExample {
public static void main(String[] args) {
    JFrame f=new JFrame("Button Example");
    JButton b=new JButton("Click Here");
    b.setBounds(50,100,95,30);
    f.add(b);
    f.setSize(400,400);
    f.setLayout(null);
    f.setVisible(true);
}
}
```

➤ Button + Listener

```
import java.awt.event.*;
import javax.swing.*;
public class ButtonExample {
public static void main(String[] args) {
    JFrame f=new JFrame("Button Example");
    final JTextField tf=new JTextField();
    tf.setBounds(50,50, 150,20);
    JButton b=new JButton("Click Here");
    b.setBounds(50,100,95,30);
    b.addActionListener(new ActionListener(){
public void actionPerformed(ActionEvent e){
            tf.setText("Welcome to Javatpoint.");
        }
    });
    f.add(b);f.add(tf);
    f.setSize(400,400);
    f.setLayout(null);
    f.setVisible(true);
}
}
```

➤ Checkbox + Listener (item listener)

```
import javax.swing.*;
import java.awt.event.*;
public class CheckBoxExample
{
    CheckBoxExample(){
      JFrame f= new JFrame("CheckBox Example");
      final JLabel label = new JLabel();
      label.setHorizontalAlignment(JLabel.CENTER);
      label.setSize(400,100);
      JCheckBox checkbox1 = new JCheckBox("C++");
      checkbox1.setBounds(150,100, 50,50);
      JCheckBox checkbox2 = new JCheckBox("Java");
      checkbox2.setBounds(150,150, 50,50);
      f.add(checkbox1); f.add(checkbox2); f.add(label);
      checkbox1.addItemListener(new ItemListener() {
          public void itemStateChanged(ItemEvent e) {
            label.setText("C++ Checkbox: "
            + (e.getStateChange()==1?"checked":"unchecked"));
          }
        });
      checkbox2.addItemListener(new ItemListener() {
          public void itemStateChanged(ItemEvent e) {
            label.setText("Java Checkbox: "
            + (e.getStateChange()==1?"checked":"unchecked"));
          }
        });
      f.setSize(400,400);
      f.setLayout(null);
      f.setVisible(true);
    }
public static void main(String args[])
{
   new CheckBoxExample();
}
}
```

➤ Text Field + Action listener (calculator

```
import javax.swing.*;
import java.awt.event.*;
public class TextFieldExample implements Act
ionListener{
   JTextField tf1,tf2,tf3;
   JButton b1,b2;
   TextFieldExample(){
      JFrame f= new JFrame();
      tf1=new JTextField();
      tf1.setBounds(50,50,150,20);
      tf2=new JTextField();
      tf2.setBounds(50,100,150,20);
      tf3=new JTextField();
      tf3.setBounds(50,150,150,20);
      tf3.setEditable(false);
      b1=new JButton("+");
      b1.setBounds(50,200,50,50);
      b2=new JButton("-");
      b2.setBounds(120,200,50,50);
      b1.addActionListener(this);
      b2.addActionListener(this);
      f.add(tf1);f.add(tf2);f.add(tf3);f.add(b1);f.ad
d(b2);
      f.setSize(300,300);
      f.setLayout(null);
      f.setVisible(true);
   }
   public void actionPerformed(ActionEvent e)
{
      String s1=tf1.getText();
      String s2=tf2.getText();
      int a=Integer.parseInt(s1);
      int b=Integer.parseInt(s2);
      int c=0;
      if(e.getSource()==b1){
         c=a+b;
      }else if(e.getSource()==b2){
         c=a-b;
      }
      String result=String.valueOf(c);
      tf3.setText(result);
   }
public static void main(String[] args) {
   new TextFieldExample();
} }
```

➤ BorderLayout(int hgap, int vgap) constructor

```
import javax.swing.*;
import java.awt.event.*;
public class TextFieldExample implements Act
ionListener{
    JTextField tf1,tf2,tf3;
    JButton b1,b2;
    TextFieldExample(){
        JFrame f= new JFrame();
        tf1=new JTextField();
        tf1.setBounds(50,50,150,20);
        tf2=new JTextField();
        tf2.setBounds(50,100,150,20);
        tf3=new JTextField();
        tf3.setBounds(50,150,150,20);
        tf3.setEditable(false);
        b1=new JButton("+");
        b1.setBounds(50,200,50,50);
        b2=new JButton("-");
        b2.setBounds(120,200,50,50);
        b1.addActionListener(this);
        b2.addActionListener(this);
        f.add(tf1);f.add(tf2);f.add(tf3);f.add(b1);f.ad
d(b2);
        f.setSize(300,300);
        f.setLayout(null);
        f.setVisible(true);
    }
    public void actionPerformed(ActionEvent e)
{
        String s1=tf1.getText();
        String s2=tf2.getText();
        int a=Integer.parseInt(s1);
        int b=Integer.parseInt(s2);
        int c=0;
        if(e.getSource()==b1){
            c=a+b;
        }else if(e.getSource()==b2){
            c=a-b;
        }
        String result=String.valueOf(c);
        tf3.setText(result);
    }
public static void main(String[] args) {
    new TextFieldExample();
} }
```

➤ Using GridLayout(int rows, int columns) Constructor

```
import java.awt.*;
import javax.swing.*;
public class MyGridLayout{
JFrame f;
MyGridLayout(){
   f=new JFrame();
   JButton b1=new JButton("1");
   JButton b2=new JButton("2");
   JButton b3=new JButton("3");
   JButton b4=new JButton("4");
   JButton b5=new JButton("5");
   JButton b6=new JButton("6");
   JButton b7=new JButton("7");
   JButton b8=new JButton("8");
   JButton b9=new JButton("9");

    // adding buttons to the frame
   f.add(b1); f.add(b2); f.add(b3);
   f.add(b4); f.add(b5); f.add(b6);
   f.add(b7); f.add(b8); f.add(b9);

   // setting grid layout of 3 rows and 3 column
s
   f.setLayout(new GridLayout(3,3));
   f.setSize(300,300);
   f.setVisible(true);
}
public static void main(String[] args) {
   new MyGridLayout();
}
}
```

➤ Using FlowLayout(int align) constructor

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

public class MyFlowLayout{
JFrame f;
MyFlowLayout(){
   f=new JFrame();

   JButton b1=new JButton("1");
   JButton b2=new JButton("2");
   JButton b3=new JButton("3");
   JButton b4=new JButton("4");
   JButton b5=new JButton("5");

    // adding buttons to the frame
   f.add(b1); f.add(b2); f.add(b3); f.add(b4); f.ad
d(b5);

    // setting flow layout of right alignment
   f.setLayout(new FlowLayout(FlowLayout.RIG
HT));

   f.setSize(300,300);
   f.setVisible(true);
}
public static void main(String[] args) {
   new MyFlowLayout();
}
}
```