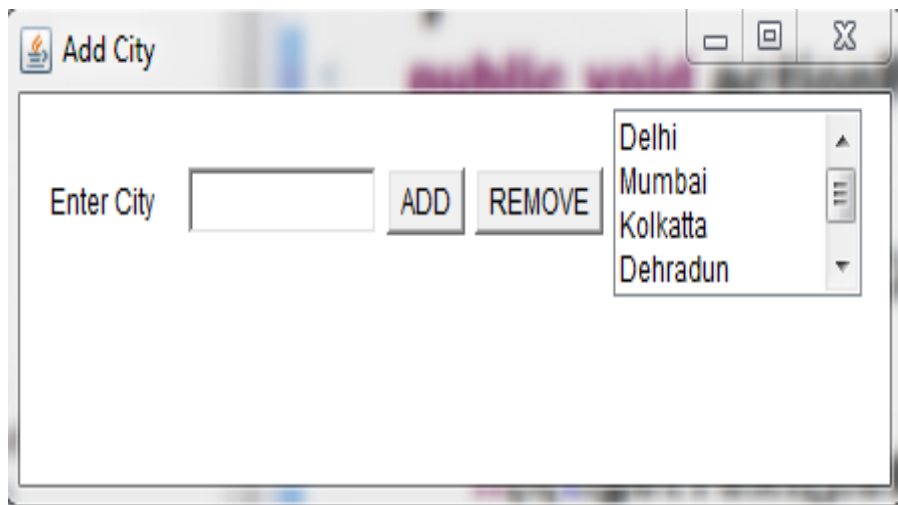## 1. Write a JAVA code for the following Snapshoot.


```java
package unit1;
import java.awt.event.*;
import java.awt.*;
public class AddCity extends Frame implements ActionListener
        {

        //java.util.Vector V=new java.util.Vector();
        //JPanel upperPanel,lowerPanel;
        //FlowLayout panelLayout;
        //GridLayout winLayout;
        Label L;
        TextField T;
        Button B;
        Button btnremove;
        List list;
        public AddCity()
        {
                Color clr1 = new Color(117,217,150);
                setBackground(clr1);
                setSize(500,500);
                setLayout(new FlowLayout());

                L=new Label("Enter Cities to be Added");
                T=new TextField(10);
                B=new Button("ADD>>");
                B.addActionListener(this);
                btnremove = new Button("Remove");
                btnremove.addActionListener(this);
                list=new List();
                addWindowListener(new WindowAdapter()
                {
                        public void windowClosing(WindowEvent e)
                        {
                                System.exit(0);
```

```java
                }
            });
            add(L);
            add(T);
            add(B);
            add(btnremove);
    add(list);
    setVisible(true);
        }

    public void actionPerformed(ActionEvent ae)
    {
            String ans;
            ans= ae.getActionCommand();
            if(ans.equals("ADD>>"))
            {
              if(!(T.getText().equals("")))
              {
               list.add(T.getText());
               T.setText("");
              }
            }
            else
            {
                    list.remove(list.getSelectedIndex());
            }
    }
    public static void main(String args[])
    {
             new AddCity();
    }
}
```

2. Store some country names and their capitals. Ask the user to select a country and its capital from given two lists. If the match is correct, display "Correct answer", otherwise display error message and tell the correct answer.

```java
import java.awt.*;
import java.awt.event.*;
public class ListDemo extends Frame implements ActionListener
{
        List lstCountry, lstCapital;
        String msg = "";
        Label lblresult;
        Button btnCheck;
        public ListDemo()
        {
                setSize(450,500);
                setLayout(new FlowLayout());
                lstCountry = new List(5);
                lstCapital = new List(5);

                lstCountry.add("India");
                lstCountry.add("Japan");
                lstCountry.add("Pakistan");
                lstCountry.add("Nepal");

                lstCapital.add("New Delhi");
                lstCapital.add("Tokyo");
                lstCapital.add("Kathmandu");
                lstCapital.add("Islamabad");
                lblresult = new Label("                    ");
                btnCheck = new Button("Check..");
                // add lists to window
                add(lstCountry);
                add(lstCapital);
                add(btnCheck);
                add(lblresult);
                // register to receive action events
                //lstCountry.addActionListener(this);
                //lstCapital.addActionListener(this);
                btnCheck.addActionListener(this);
                setVisible(true);
        }

        public void actionPerformed(ActionEvent ae)
        {
                String msg2;
                msg = "Current Country: ";
                msg += lstCountry.getSelectedItem();

                msg2 = "Current Capital: ";
                msg2 += lstCapital.getSelectedItem();
```

```java
            lblresult.setText(msg +"  " + msg2);


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

3. Create a GUI to add two numbers

```java
package unit1;
import java.awt.*;
import java.awt.event.*;
public class SumDemo extends Frame implements ActionListener
{
        Label lblnum1, lblnum2,lblresult;
        TextField txtnum1,txtnum2;
        Button btnsum, btnmul,btnclear;
        SumDemo()
        {
                setSize(450,450);
                setTitle("My First AWT Prog");
                FlowLayout fl = new FlowLayout();
                setLayout(fl);
                lblnum1 = new Label("Enter Num1:");
                lblnum2 = new Label("Enter Num2:");
                lblresult = new Label("            ");
                txtnum1 = new TextField(10);
                txtnum2 = new TextField(10);
                btnsum = new Button("Sum");
                btnmul = new Button("Multiply");
                btnclear = new Button("Clear");
                add(lblnum1);
                add(txtnum1);
                add(lblnum2);
                add(txtnum2);
                add(btnsum);
                add(btnmul);
                add(btnclear);
                btnsum.addActionListener(this);
                btnmul.addActionListener(this);
                btnclear.addActionListener(this);
                add(lblresult);
                addWindowListener(new WindowAdapter()
                {
                        public void windowClosing(WindowEvent e)
                        {
                                System.exit(0);
                        }
                });


                setVisible(true);

        }
        public static void main(String args[])
        {
          SumDemo ob = new SumDemo();
        }
```

```java
public void actionPerformed(ActionEvent e)
{
        // TODO Auto-generated method stub
        String ans = e.getActionCommand();

        int a,b;
        if(ans.equals("Sum"))
        {
         a = Integer.parseInt(txtnum1.getText());
         b = Integer.parseInt(txtnum2.getText());
         lblresult.setText("Sum ="+ (a+b));
        }
        else if(ans.equals("Multiply"))
        {
                a = Integer.parseInt(txtnum1.getText());
                b = Integer.parseInt(txtnum2.getText());
                lblresult.setText("Multiply ="+ (a*b));
        }
        else
        {
                txtnum1.setText("");
           txtnum2.setText("");
        }
    }
}
```

4. Demonstration of Checkbox/radiobutton Demo

```java
package unit1;

import java.awt.*;

import java.awt.event.*;

public class CheckBoxDemo extends Frame implements ItemListener

{

Checkbox winXP, winVista, solaris, mac;

Label l1,l2,l3,l4;

CheckboxGroup gb;

//TextArea txtfeedback;

public CheckBoxDemo()

{

        setLayout(new FlowLayout());
```

```java
        gb = new CheckboxGroup();

        winXP = new Checkbox("Windows XP",true,gb);

        winVista = new Checkbox("Windows Vista",gb,false);

        solaris = new Checkbox("Solaris",gb,false);

        mac = new Checkbox("Mac OS",gb,false);

//txtfeedback = new TextArea("",10,40);

add(winXP);

add(winVista);

add(solaris);

add(mac);

//add(txtfeedback);

winXP.addItemListener(this);

winVista.addItemListener(this);

solaris.addItemListener(this);

mac.addItemListener(this);

addWindowListener(new WindowAdapter()

{

        public void windowClosing(WindowEvent e)

        {

                System.exit(0);

        }

});



l1 = new Label();

add(l1);

l2 = new Label();

add(l2);

l3 = new Label();

add(l3);
```

```java
        l4 = new Label();

        add(l4);

        setSize(350,350);

        setVisible(true);


    }

    public void itemStateChanged(ItemEvent ie)
    {


            //  l1.setText(gb.getSelectedCheckbox().getState() + "");

         /*Checkbox ob =   gb.getSelectedCheckbox();

          String s =  ob.getLabel();

            l1.setText(s); */

            l1.setText(" Windows XP: " + winXP.getState() );

            l2.setText(" Windows Vista: " + winVista.getState() );

            l3.setText(" Solaris: " + solaris.getState());

            l4.setText(" Mac OS: " + mac.getState());

    }

    public static void main(String args[])

    {

            new CheckBoxDemo();

    }


}
```

5. Demonstration of GridLayout

```java
package unit1;

import java.awt.*;
import java.awt.event.*;
class GridLayoutDemo2 extends Frame
{

  public GridLayoutDemo2()
  {
        // Set the frame properties
        setTitle("GridLayout Demo");
        setSize(400,400);
        GridLayout gl = new GridLayout(3,3);
        setLayout(gl);
        Panel p1 = new Panel();
        p1.setLayout(new GridLayout(1,4));
        add(new Button("Button1"));
        add(new Button("Button2"));
        add(new Button("Button3"));

        p1.add(new Button("Button4"));
        p1.add(new Button("Button5"));
        p1.add(new Button("Button6"));
        p1.add(new Button("Button7"));
        add(p1);

        add(new Button("Button8"));
        add(new Button("Button9"));
        add(new Button("Button9"));
        add(new Button("Button10"));
        add(new Button("Button11"));

        setVisible(true);
  }
  public static void main(String args[])
  {
        new GridLayoutDemo2();
  }
}
```

6. Demonstration of BorderLayout

```java
package unit1;
import java.awt.*;
public class BorderLayout2 extends Frame
{
    BorderLayout2()
    {
        setSize(300,300);
        setVisible(true);
        setLayout(new BorderLayout());
        //Button btnNorth = new Buttton("This is
acroos the top.");
        //add(btnNorth, BorderLayout.NORTH);
        Button b1 = new Button("This is acroos the
top.");
        add(b1, BorderLayout.NORTH);

        //  add(new Button("This is acroos the top."),
BorderLayout.NORTH);
        add(new Button("The footer message might go
here."), BorderLayout.SOUTH);
        add(new Button("Right"), BorderLayout.EAST);
        add(new Button("Left"), BorderLayout.WEST);


        String msg = "The reasonable man adapts" +
                     "hmself to the world;\n"    +
                     "the unreasonable one persists in
" +
                     "trying to adapt the world to
himself.\n" +
                     "Therefore all progress depends "
+
                     " on the unreasonable man.\n\n"
+
                     "        George Bernard Shaw\n\n
";
        TextArea txtArea = new TextArea(msg);
        add(txtArea, BorderLayout.CENTER);

        //add(new TextArea(msg), BorderLayout.CENTER);
```

```java
 }
public static void main(String a[])
{
    new BorderLayout2();
}

}
```

7. User Id Password Program

```java
package unit1;
import java.awt.*;
import java.awt.event.*;
public class PasswordDemo extends Frame implements
ActionListener
{
    Label l1,l2,l3;
    TextField t1,t2;
    Button b1;
    Panel p1,p2,p3;
    PasswordDemo()
    {
        setLayout(new GridLayout(3,1));
        Panel p1 = new Panel();
        GridLayout gl = new GridLayout(2,2);
        p1.setLayout(gl);
        p2=new Panel(new FlowLayout());
        p3=new Panel(new FlowLayout());
        l1=new Label("Username");
        t1=new TextField(30);
        l2=new Label("Passward");
        t2=new TextField(30);
        t2.setEchoChar('*');
        b1=new Button("Log In");
        l3=new Label("
");

        p1.add(l1);
        p1.add(t1);
        p1.add(l2);
        p1.add(t2);

        p2.add(b1);
        p3.add(l3);

        add(p1);
        add(p2);
        add(p3);

        b1.addActionListener(this);
```

```java
            setTitle("Log In");
            setSize(400,400);
            setVisible(true);
            addWindowListener(new WindowAdapter()
            {
                public void windowClosing(WindowEvent e)
                {
                    System.exit(0);
                }
            });
        }
    public static void main(String args[])
    {
        new PasswordDemo();
    }

        public void actionPerformed(ActionEvent e)
    {

        // TODO Auto-generated method stub
        String u1,p1;
        u1=t1.getText();
        p1=t2.getText();
        if((u1.equals("mahesh"))&&(p1.equals("gehu")))
        {
            l3.setText("Welcome User "+ u1);
        }
        else
        {
            l3.setText("Either Username or Password is
Wrong... Please Try Again!!!");
        }
        }

    }
```