1] Demonstrate

    A] Flow Layout

```java
import java.awt.*;
public class FlowLayoutDemo extends Frame
{
FlowLayoutDemo()
{
setLayout(new FlowLayout());
Button b1 =new Button("Button 1");
add(b1);
}
public static void main(String[] args)
{
FlowLayoutDemo f=new FlowLayoutDemo();
f.setVisible(true);
f.setSize(300,300);
}
}
```

    B] Grid Layout

```java
import java.awt.*;
public class GridLayoutDemo extends Frame
{
GridLayoutDemo()
{
setLayout(new GridLayout());
Button b1 =new Button("Button 1");
Button b2 =new Button("Button 2");
Button b3 =new Button("Button 3");
Button b4 =new Button("Button 4");
add(b1);
add(b2);
add(b3);
add(b4);
```

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

C] Border Layout

```
import java.awt.*;
public class BorderDemo extends Frame
{
BorderDemo()
{
setLayout(new BorderLayout());
Button b1=new Button("Button 1");
Button b2=new Button("Button 2");
Button b3=new Button("Button 3");
Button b4=new Button("Button 4");
Button b5=new Button("Button 5");
add(b1,BorderLayout.NORTH);
add(b2,BorderLayout.SOUTH);
add(b3,BorderLayout.EAST);
add(b4,BorderLayout.WEST);
add(b5,BorderLayout.CENTER);
}
public static void main(String[] args)
{
BorderDemo b=new BorderDemo();
b.setVisible(true);
b.setSize(500,500);
}
}
```

D] Card Layout

2] Create a form(awt) using TextField,TextArea,Choice,List,Button,Checkbox,CheckboxGroup etc

```java
import java.awt.*;
public class FormDemo extends Frame
{
FormDemo()
{
setLayout(new FlowLayout());
Label l1 = new Label("name :-");
add(l1);
TextField t1 = new TextField(10);
add(t1);

Label l2 = new Label("address:-");
add(l2);
TextArea t2 = new TextArea(20,20);
add(t2);

Label l3 = new Label("Year:-");
add(l3);
Choice c = new Choice();
c.add("FY");
c.add("SY");
c.add("TY");
add(c);

Label l4 = new Label("subject:-");
add(l4);
List l = new List();
l.add("java");
l.add("acn");
l.add("ste");
add(l);

Label l5 = new Label("Facilities:-");
```

```java
add(l5);

Checkbox ch = new Checkbox("Library");

Checkbox ch1 = new Checkbox("Sport");

add(ch);

add(ch1);


Label l6 = new Label("Gender:-");

add(l6);

CheckboxGroup cbg = new CheckboxGroup();

Checkbox ch3 = new Checkbox("male",cbg,true);

Checkbox ch4 = new Checkbox("female",cbg,false);

add(ch3);

add(ch4);


Button b1 = new Button("Submit");

add(b1);


}


public static void main(String[] args)

{

FormDemo f = new FormDemo();

f.setVisible(true);

f.setSize(500,500);

}

}
```

3] Create a form(Swing) using JTextField,JTextArea,JComboBox,JList,JButton,JCheckbox,JRadioButton

```java
import java.awt.*;

import javax.swing.*;


public class FormDemo extends Frame
{
FormDemo()
{
setLayout(new FlowLayout());

JLabel l1 = new JLabel("name :-");
add(l1);
JTextField t1 = new JTextField(10);
add(t1);


JLabel l2 = new JLabel("address:-");
add(l2);
JTextArea t2 = new JTextArea(20,20);
add(t2);


JLabel l3 = new JLabel("Year:-");
add(l3);
JComboBox c = new JComboBox();
c.addItem("FY");
c.addItem("SY");
c.addItem("TY");
add(c);


JLabel l4 = new JLabel("subject:-");
add(l4);
String[] subjects = {"Java", "ACN", "STE"};
    JList<String> l = new JList<>(subjects);
add(l);
```

```java
JLabel l5 = new JLabel("Facilities:-");

add(l5);

JCheckBox ch = new JCheckBox("Library");

JCheckBox ch1 = new JCheckBox("Sport");

add(ch);

add(ch1);


JLabel l6 = new JLabel("Gender:-");

add(l6);

JRadioButton r = new JRadioButton("male",true);

JRadioButton r1 = new JRadioButton("female",false);


add(r);

add(r1);


JButton b1 = new JButton("Submit");

add(b1);


}


public static void main(String[] args)

{

FormDemo f = new FormDemo();

f.setVisible(true);

f.setSize(500,500);

}

}
```

4] Demonstrate

A] TabbedPane

```java
import java.applet.*;
import java.awt.*;
import javax.swing.*;
public class TabDemo extends JApplet {
        public void init() {
        Container cp = getContentPane();
        JTabbedPane jtp = new JTabbedPane();
        jtp.addTab ("Flowers", new Pan1());
        jtp.addTab ("Fruits", new Pan2());
        cp.add(jtp);
        } }
class Pan1 extends Panel{
        Pan1() {
        setLayout(new FlowLayout());
        JComboBox jc = new JComboBox();
        jc.addItem("Lotus");
        jc.addItem("Rose");
add(jc);
        } }
class Pan2 extends Panel{
        Pan2() {
        setLayout(new FlowLayout());
        JCheckBox C1 = new JCheckBox("Mango");
        JCheckBox C2 = new JCheckBox("Apple");
        add(C1);
        add(C2);
        }
}
/*
<applet code = TabDemo.class width=500 height=500></applet>
*/
```

B] ScrollPane

```java
import java.awt.*;
import javax.swing.*;
import java.applet.*;
public class ScrollDemo extends JApplet
{
public void init()
{
setLayout(new FlowLayout());

JTextArea t = new JTextArea(20,20);
t.setText("this s scroll pane and program is created by chaitanya");

JScrollPane js = new JScrollPane(t);
add(js);
}
}
/*
<applet code= ScrollDemo.class width=500 height=500></applet>
*/
```

C] JTree

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

public class TreeDemo extends JFrame
{
TreeDemo()
{
Container cp = getContentPane();
cp.setLayout(new BorderLayout());

DefaultMutableTreeNode a = new DefaultMutableTreeNode("first");
```

```java
DefaultMutableTreeNode b = new DefaultMutableTreeNode("second");

DefaultMutableTreeNode c = new DefaultMutableTreeNode("third");


a.add(b);

a.add(c);


JTree t = new JTree(a);

cp.add(t,BorderLayout.WEST);

}

public static void main(String[] args)

{

TreeDemo x =new TreeDemo();

x.setSize(300,300);

x.setVisible(true);

}

}
```

D]  JTable

```java
import javax.swing.*;

import javax.swing.JTable.*;

import java.awt.*;


public class TableDemo extends JFrame

{

TableDemo()

{

Container cp = getContentPane();

cp.setLayout(new FlowLayout());


String[] column={"name","roll no"};


Object[][] data ={ {"chaitanya","220325"},{"krushna","220321"},{"harsh","220340"}};
```

```java
JTable t = new JTable(data,column);

cp.add(t);


}


public static void main(String[] args)

{

TableDemo x =new TableDemo();

x.setSize(300,300);

x.setVisible(true);


}
}
```

5] WAP to demonstrate:

A] ActionListener

B] MouseListener

C]MouseMotionLister

D]KeyListener

E]temListener

F]WindowListener

6]  WAP for Factory methods of InetAdrress Class

```java
import java.net.*;
public class InetDemo2
{
public static void main(String args[])throws UnknownHostException
{
System.out.println("IP address of Local Machine is:"+InetAddress.getLocalHost());
System.out.println("Ip address of Google is:"+InetAddress.getByName("Google.com"));
InetAddress[] i=InetAddress.getAllByName("Yahoo.com");
for(InetAddress inet:i)
{
System.out.println("IP address:"+inet.getHostAddress());
}
}
}
```

7] WAP for Chatting application : UDP & TCP

Client :-

```java
import java.io.*;

import java.net.*;


public class Client {
        public static void main(String args[]) throws IOException{


Socket s = new Socket("localhost", 6666);

DataInputStream din = new DataInputStream(s.getInputStream());

DataOutputStream dout = new DataOutputStream(s.getOutputStream());


BufferedReader br = new BufferedReader(new InputStreamReader(System.in));


String s1= " ", s2= " ";
while(!s1.equals("Stop")) {
        s1 = br.readLine();
dout.writeUTF(s1);


dout.flush();


s2= din.readUTF();
System.out.println("chaituu Says: "+s2);
}
dout.close();
s.close();
        }
}
```

Server :-

```java
import java.net.*;
import java.io.*;
public class Server
{
 public static void main(String args[])throws  Exception
 {

  ServerSocket ss=new ServerSocket(6666);
   Socket s=ss.accept();

DataInputStream  din=new DataInputStream(s.getInputStream());
DataOutputStream  dout=new DataOutputStream(s.getOutputStream());

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

  System.out.println("Waiting for friends request..........");

  String s1=" ",s2=" ";

 while(!s1.equals("stop"))
 {

 s2=din.readUTF();
 System.out.println("Aditya  Says  : "+s2);


 s1=br.readLine();
 dout.writeUTF(s1);
 dout.flush();
}
dout.close();
s.close();
}
}
```

8] WAP To demonstrate URL class

```java
import java.net.*;
public class URLDemo
{
public static void main(String args[])throws Exception
{
URL obj=new URL("http://www.msbte.org.in");
System.out.println("The host name is:"+obj.getHost());
System.out.println("The protocol is:"+obj.getProtocol());
System.out.println("The Port Number is:"+obj.getPort());
System.out.println("the file is:"+obj.getFile());
}
}
```

9] WAP to create/insert/delete/update data from database using java

```java
import java.sql.*;
public class DatabaseDemo
{
public static void main(String[] args) throws Exception
{
Class.forName("com.mysql.cj.jdbc.Driver");
System.out.println("Drivers loaded");


Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/Database1","root","root");
System.out.println("Connection established");


Statement s1 =con.createStatement();
s1.execute("create table Table1(id int(10),name varchar(10))");
System.out.println("Table created");



Statement s2 = con.createStatement();
s2.executeUpdate("insert into table1 values(1,'chaitanya'),(2,'krushna'),(3,'harsh')");
System.out.println("values inserted");


Statement s3 = con.createStatement();
ResultSet rs=s3.executeQuery("select * from table1");
while(rs.next()){
System.out.println("Id:-"+rs.getInt(1)+"|"+ "Name:-"+rs.getString(2));
}


Statement s4 = con.createStatement();
s4.executeUpdate("update table1 set name='Manthan' where name='harsh'");
System.out.println("table Updated");


Statement s5 = con.createStatement();
```

```java
s5.executeUpdate("delete from table1 where name='krushna'");

System.out.println("row deleted");




ResultSet rs1 = s5.executeQuery("select * from table1");

while(rs1.next()){

System.out.println("id:-" + rs1.getInt(1) +"|" + "name:- "+ rs1.getString(2));


}
}
}
```

10] Create a servlet to take input from user and display hello username on browser

11] Create a servlet to display "WELCOME TO MSBTE" on browser