



```
// 2. Japplet using swing control to design a layout
```

```
import javax.swing.*;
import java.applet.*;
import java.awt.*;
import java.awt.event.*;
import java.awt.event.ActionEvent;
/*<applet code="myswing.class" width=500 height=500>
</applet>*/
public class myswing extends JApplet implements ActionListener
{
    JTextField name,age;
    JCheckBox cb1,cb2,cb3,cb4,cb5,cb6;
    JButton ok,cancel;
    JPanel p1,p2,p3,p4,p5,p6,p7,p8;

    public void init()
    {
        p1=new JPanel();
        p2=new JPanel();
        p3=new JPanel();
        p4=new JPanel();
        p5=new JPanel();
        p6=new JPanel();
        p7=new JPanel();
        p8=new JPanel();
        setLayout(new GridLayout(5,1));
        JLabel n=new JLabel("Name:");
        JLabel ag=new JLabel("age:");
        JLabel ci=new JLabel("city:");
        JLabel soft=new JLabel("software:");
        name=new JTextField(25);
        age=new JTextField(2);
        cb5=new JCheckBox("delhi");
        cb6=new JCheckBox("chennai");
        cb1=new JCheckBox("oracle");
        cb2=new JCheckBox("visual studio");
        cb3=new JCheckBox("java");
        cb4=new JCheckBox("cpp");
        ok=new JButton("ok");
        cancel=new JButton("CANCEL");
        ok.addActionListener(this);
        cancel.addActionListener(this);
        p1.add(n);
        p1.add(name);
        p2.add(ag);
        p2.add(age);
        p3.add(ci);
        p3.add(cb5);
        p3.add(cb6);
        p4.add(soft);
        p4.add(cb1);
        p4.add(cb2);
        p4.add(cb4);
        p5.add(ok);
        p5.add(cancel);
        add(p1);
        add(p2);
        add(p3);
        add(p4);
    }
}
```

```

        add(p5);
    }
    public void actionPerformed (ActionEvent ae)
    {
        String na,ag;
        na=name.getText();
        ag=age.getText();
        String str=ae.getActionCommand();
        System.out.println(str);
        if(str.equals("ok"))
        {
            if(na.length()>25)
                System.out.println("INVALID");
            else
                System.out.println("VALID");
        }
        else
            if(str.equals("CANCEL"))
                System.out.println("CANCEL");
                name.setText(" ");
                age.setText(" ");
    }
}

```

```

// 3.JDBC connectivity
import java.sql.*;
import java.io.*;
public class jdbc
{
    static void myLine()
    {
        for(int i=0;i<70;i++)
        {
            System.out.print("*");
        }
        System.out.println();
    }
    public static void main(String args[]) throws IOException
    {
        String ans,x;
        int a;
        BufferedReader bin=new BufferedReader(new InputStreamReader(System.in));
        System.out.println("\t\t\t*****JDBC PROGRAMMING*****\n\n");
        do
        {
            System.out.println("\t\t1.Insert Record");
            System.out.println("\t\t2.Update Record");
            System.out.println("\t\t3.Select Record");
            System.out.println("\t\t4.Exit");
            System.out.println("\t\tEnter Your Choice(1/2/3/4):");
            ans=bin.readLine();
            a=Integer.parseInt(ans);
            switch(a)
            {
                case 1:
                    try
                    {
                        Class.forName("com.mysql.jdbc.Driver");
                        //Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
                        Connection
                        c=DriverManager.getConnection("jdbc:mysql://localhost:3306/bdu","root","a
                        dmin@123");
                        Statement st=c.createStatement();
                        //BufferedReader bin=new BufferedReader(new
                        InputStreamReader(System.in));
                        String no,old,sa,na;
                        System.out.println("enter employee number:");
                        no=bin.readLine();
                        System.out.println("enter employee name:");
                        na=bin.readLine();
                        System.out.println("enter employee salary:");
                        sa=bin.readLine();
                        st.execute("insert into emp values('"+no+"','"+na+"','"+sa+"')");
                        System.out.println("one row inserted");
                    }
                    catch(Exception e)
                    {
                        System.out.println("exception"+e);
                    }
                    break;

                case 2:
                    try
                    {

```

```

Class.forName("com.mysql.jdbc.Driver");
//Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
Connection
c=DriverManager.getConnection("jdbc:mysql://localhost:3306/bdu","root","a
dmin@123");
Statement st=c.createStatement();
//BufferedReader bin=new BufferedReader(new
InputStreamReader(System.in));
String no,old,sa,na;
System.out.println("enter old employee number:");
old=bin.readLine();
System.out.println("enter new employee number:");
no=bin.readLine();
System.out.println("enter new employee name:");
na=bin.readLine();
System.out.println("enter new employee salary:");
sa=bin.readLine();
st.execute("update emp set no='"+no+"',na='"+na+"',sa='"+sa+"' where
no='"+old+"'");
System.out.println("one row updated");
}
catch(Exception e)
{
System.out.println("exception"+e);
}
break;

case 3:
try
{
Class.forName("com.mysql.jdbc.Driver");
//Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
Connection
m=DriverManager.getConnection("jdbc:mysql://localhost:3306/bdu","root","a
dmin@123");
Statement st=m.createStatement();
ResultSet rs;
rs=st.executeQuery("select * from emp");
myLine();
System.out.println("empno\t\t\t nam\t\t\t salary");
myLine();

while(rs.next())
{
System.out.println(rs.getString(1)+"\t\t\t"+rs.getString(2)+"\t\t\t"+rs.g
etString(3));
}
}
catch(Exception e)
{
System.out.println("Exception"+e);
}
break;

case 4:
System.exit(0);
break;
}
System.out.println("do you want to continue?(y/n)");
x=bin.readLine();

```

```
}  
while(x.equalsIgnoreCase("y"));  
}  
}
```

AddClient.Java

=====

```
import java.rmi.*;
public class AddClient
{
    public static void main (String args[])
    {
        try{
            String addserverURL="rmi://" +args[0]+ "/AddServer";
            AddServerIntf addserverintf=(AddServerIntf)Naming.lookup(addserverURL);
            System.out.println("The first number is:"+args[1]);
            double d1=Double.valueOf(args[1]).doubleValue();
            System.out.println("the second number is:"+args[2]);
            double d2=Double.valueOf(args[2]).doubleValue();
            System.out.println("The sum is:"+addserverintf.add(d1,d2));
        }
        catch(Exception e)
        {
            System.out.println("Exception:"+e);
        }
    }
}
```

AddServer.java

=====

```
import java.net.*;
import java.rmi.*;
public class AddServer
{
    public static void main(String args[])
    {
        try{
            AddServerImpl addserverimpl=new AddServerImpl();
            Naming.rebind("AddServer",addserverimpl);
        }
        catch(Exception e)
        {
            System.out.println("Exception"+e);
        }
    }
}
```

AddServerImpl.java

=====

```
import java.rmi.*;
import java.rmi.server.*;
public class AddServerImpl extends UnicastRemoteObject implements
AddServerIntf
{
    public AddServerImpl()throws RemoteException
    {
    }
    public double add(double d1,double d2)
    {
        return d1+d2;
    }
}
```

AddServerIntf.java

=====

```
import java.rmi.*;
public interface AddServerIntf extends Remote
{
double add(double d1,double d2)throws RemoteException;
}
```



```
//5. To create a Cookie and set the expiry time of the same.
//Cookie.html
//=====
<html>
<head><title> Cookies</title>
</head>
<body>
<form action="http://localhost:7001/serv/cookie" method=get>
Enter the No<input type=text name="sno"><br>
Ente the Name<input type=text name="sname"><br>
Enter the marks<input type=text name="smarks"><br>
<input type=submit value=" ADD "><br>
</form>
</body>
</html>
```

```
//Cookie.java
//=====
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.util.*;
public class cookie extends HttpServlet
{
public void doGet (HttpServletRequest req, HttpServletResponse res)
throws IOException,ServletException
{
PrintWriter out = res.getWriter();
res.setContentType ("text/html");
String s,t;
Enumeration e = req.getParameterNames();
Cookie co;
while (e.hasMoreElements())
{
s = (String) e.nextElement();
t = req.getParameter(s);
out.println(s);
if (s.equals("sno"))
{
co=new Cookie ("sno",t);
co.setMaxAge(24*60*60);
res.addCookie (co);
}
if (s.equals("sname"))
{
co=new Cookie ("sname",t);
co.setMaxAge(24*60*60);
res.addCookie (co);
}
if (s.equals("smarks"))
{
co=new Cookie ("smarks",t);
co.setMaxAge(10);
res.addCookie (co);
}
}
out.print ("cookies successfully added");}
```

```
public void doPost (HttpServletRequest req, HttpServletResponse res)
throws IOException, ServletException
{
    doGet(req,res);
}
}
```

```

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

public class CounterServlet extends HttpServlet
{
    //Instance variable used for counting hits on this servlet
    private int iHitCounter;

    //init method just initializes the hitCounter to zero
    public void init() throws ServletException
    {
        iHitCounter = 0;
    }

    public void doGet(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException
    {
        PrintWriter out = response.getWriter();
        out.println("<form><fieldset style='width:15%'">");
        out.println("<h3>Welcome to my website !</h3><hr>");
        out.println("You are visitor number: " + (++iHitCounter));
        out.println("</fieldset></form>");
    }

    public void doPost(HttpServletRequest request, HttpServletResponse
response) throws ServletException, IOException
    {
        doGet(request, response);
    }
}

```

```

import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;

public class FormLogin extends HttpServlet {
    public static String USER_KEY = "ServletLogin.user";

    public static String FIELD_USER = "username";

    public static String FIELD_PASSWORD = "password";

    public void doGet(HttpServletRequest req, HttpServletResponse resp)
throws ServletException,
        java.io.IOException {
        resp.setContentType("text/html");
        java.io.PrintWriter out = resp.getWriter();
        resp.setHeader("Expires", "Tues, 01 Jan 1980 00:00:00 GMT");
        String uri = req.getRequestURI();

        HttpSession session = req.getSession();
        String user = (String) session.getAttribute(USER_KEY);

        if (user == null) {
            login(out, uri);
            return;
        }
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Welcome</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<center><h2>Welcome to our site!</h2>");
        out.println("</center><br><br>");
        out.println("</body>");
        out.println("</html>");
        out.flush();
    }

    public void doPost(HttpServletRequest req, HttpServletResponse resp)
throws ServletException,
        java.io.IOException {
        resp.setContentType("text/html");
        java.io.PrintWriter out = resp.getWriter();
        HttpSession session = req.getSession(true);
        String user = (String) session.getAttribute(USER_KEY);

        if (user == null) {
            String username = req.getParameter(FIELD_USER);
            String password = req.getParameter(FIELD_PASSWORD);

            if (!validUser(username, password)) {
                out.println("<html>");
                out.println("<title>Invalid User</title>");
                out.println("<body><center><h2>" + "Invalid User!</h2><br>");
                out.println("Press the 'Back' button to try again");
                out.println("</center></body></html>");
                out.flush();
                return;
            }
        }
    }
}

```

```

        }
        session.setAttribute(USER_KEY, username);
    }
    resp.sendRedirect(req.getRequestURI());
}

protected void login(java.io.PrintWriter out, String uri) throws
java.io.IOException {
    out.println("<html>");
    out.println("<head>");
    out.println("<title>Login</title>");
    out.println("<center><h2>Welcome! Please login</h2>");
    out.println("<br><form method=POST action=\"\" + uri + \"\">");
    out.println("<table>");
    out.println("<tr><td>User ID:</td>");
    out.println("<td><input type=text name=\" + FIELD_USER + \" "
size=30></td></tr>");
    out.println("<tr><td>Password:</td>");
    out.println("<td><input type=password name=\" + FIELD_PASSWORD + \" "
size=10></td></tr>");
    out.println("</table><br>");
    out.println("<input type=submit value=\"Login\">");
    out.println("</form></center></body></html>");
}

protected boolean validUser(String username, String password) {
    boolean valid = false;
    if ((username != null) && (username.length() > 0)) {
        valid = username.equals(password);
    }

    return valid;
}
}

```

```
package mypack;
public class Test{
public static void main(String args[]){
Employee e=new Employee();//object is created
e.setName("Arjun");//setting value to the object
System.out.println(e.getName());
}}
```

```
//Employee.java
```

```
package mypack;  
public class Employee implements java.io.Serializable{  
    private int id;  
    private String name;  
    public Employee(){}  
    public void setId(int id){this.id=id;}  
    public int getId(){return id;}  
    public void setName(String name){this.name=name;}  
    public String getName(){return name;}  
}
```

```

import java.awt.*;
import java.awt.image.BufferedImage;

import java.io.*;

import javax.imageio.ImageIO;
import javax.swing.JFrame;

public class GrayScale {

    BufferedImage image;
    int width;
    int height;

    public GrayScale() {

        try {
            File input = new File("digital_image_processing.jpg");
            image = ImageIO.read(input);
            width = image.getWidth();
            height = image.getHeight();

            for(int i=0; i<height; i++) {

                for(int j=0; j<width; j++) {

                    Color c = new Color(image.getRGB(j, i));
                    int red = (int)(c.getRed() * 0.299);
                    int green = (int)(c.getGreen() * 0.587);
                    int blue = (int)(c.getBlue() * 0.114);
                    Color newColor = new Color(red+green+blue,

                    red+green+blue, red+green+blue);

                    image.setRGB(j,i,newColor.getRGB());
                }
            }

            File ouptut = new File("grayscale.jpg");
            ImageIO.write(image, "jpg", ouptut);

        } catch (Exception e) {}
    }

    static public void main(String args[]) throws Exception {
        GrayScale obj = new GrayScale();
    }
}

```