

CS:28 Practical on CS:25 Advance Java Programming (J2EE)

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Dr. Sharon V. Mohtra
Assistant Professor,
Department of Computer Applications,
Christ College, Rajkot

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1. Write a Servlet to display greeting message "Welcome to my first Web Application" by subclassing HttpServlet.

```
package Exe_1;

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Exe_1", urlPatterns={"/Exe_1"})
public class Exe_1 extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Display Greeting Message</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>Welcome To My First Web
Application</h1>");
            out.println("</body>");
            out.println("</html>");
        } finally {
            out.close();
        }
    }

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse
response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    @Override
```

```
protected void doPost(HttpServletRequest request, HttpServletResponse  
response)  
throws ServletException, IOException {  
    processRequest(request, response);  
}  
}
```

Output:

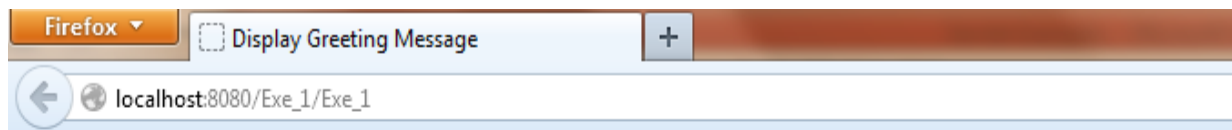
How to run this program.....

Step 1: If you do not see application folder hierarchical layering, click on plus sign.

Step 2: Click on 'Source Packages'.

Step 3: Click on your package.

Step 4: Right click on java file and click on 'Run File'.

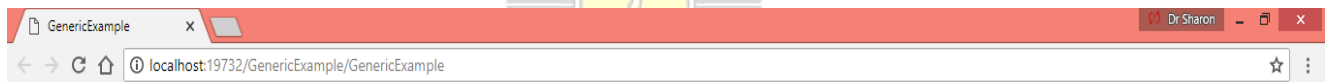


Welcome To My First Web Application

2. Write a Servlet to display greeting message by sub-classing GenericServlet.

```
public class GenericExample extends GenericServlet {  
    @Override  
    public void service(ServletRequest req, ServletResponse res) throws  
        ServletException, IOException {  
        res.setContentType("text/html;charset=UTF-8");  
        try (PrintWriter out = res.getWriter()) {  
            out.println("<!DOCTYPE html>");  
            out.println("<html>");  
            out.println("<head>");  
            out.println("<title>Servlet GenericExample</title>");  
            out.println("</head>");  
            out.println("<body>");  
            out.println("<h1>Servlet GenericExample </h1>");  
            out.println("</body>");  
            out.println("</html>");  
        }  
    }  
}
```

Output:



Hello Generic Servlet...

3. Write a Servlet to print the Servlet life cycle messages appropriately.

```
package Exe_3;

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name = "Exe_3", urlPatterns = {"/Exe_3"})
public class Exe_3 extends HttpServlet {
    private int count;

    public void init(ServletConfig config) throws ServletException {
        super.init(config);
        getServletContext().log("init() called");
        count=0;
    }

    protected void service(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        getServletContext().log("service() called");
        count++;
        response.getWriter().write("Incrementing the count: Count = "+count);
    }

    public void destroy() {
        getServletContext().log("destroy() called");
    }
}
```

Output:

How to run this program.....

Step 1: If you do not see application folder hierarchical layering, click on plus sign.

Step 2: Click on 'Source Packages'.

Step 3: Click on your package.

Step 4: Right click on java file and click on 'Run File'.

Check the output on web server log in NetBeans.

4. Create a Servlet file which takes two text boxes like student roll no and name and print it on the same page.

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
    <title>Student Data Entry</title>
  </head>
  <body>
    <h1>Student Data Entry</h1>
    <form method="post" action="Exe_4">
      <table cellpadding="0" cellspacing="0" border="0">
        <tr>
          <td>Enter Student Roll No : </td>
          <td><input type="text" name="roll_no"/>
        </tr>
        <tr>
          <td>Enter Student Name : </td>
          <td><input type="text" name="name"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="submit"
value="Submit"/>
        </tr>
      </table>
    </form>
  </body>
</html>
```

II. Exe_4.java

```
package Exe_4;

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

/**
 *
```

```
* @author Dr. Sharon V. Mohtra
*/
@WebServlet(name="Exe_4", urlPatterns={"/Exe_4"})
public class Exe_4 extends HttpServlet {
    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response)
    {
        String name, roll_no;
        name = request.getParameter("name");
        roll_no = request.getParameter("roll_no");
        response.setContentType("text/html");
        PrintWriter printWriter;
        try
        {
            printWriter = response.getWriter();
            printWriter.println("<title>Student Data</title>");
            printWriter.println("<p>");
            printWriter.print("Student Roll Number Is : ");
            printWriter.print(roll_no);
            printWriter.print("</p>");

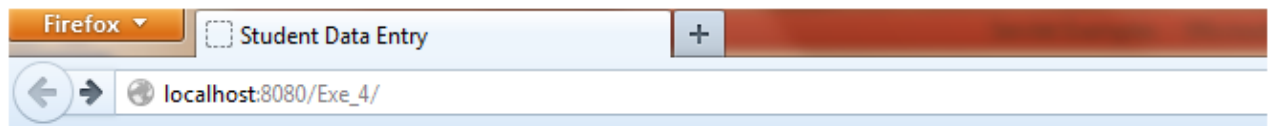
            printWriter.println("<p>");
            printWriter.print("Student Name Is : ");
            printWriter.print(name);
            printWriter.print("</p>");
        }
        catch (IOException e)
        {
            e.printStackTrace();
        }
    }
}
```

Output:

How to run this program.....

Step 1: Right click on your application.

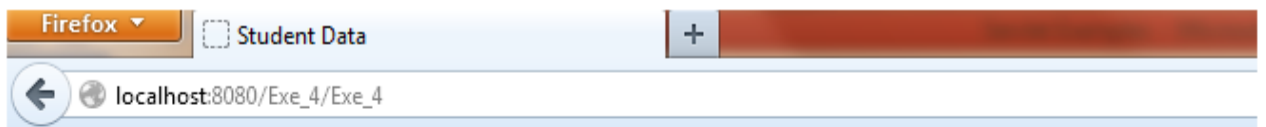
Step 2: Click on 'Run'.



Student Data Entry

Enter Student Roll No :

Enter Student Name :



Student Roll Number Is : 56

Student Name Is : Sharon



5. Write a Servlet to validate a user, if he is a valid user forward him to next page Else redirect back to the previous page with appropriate error message. Take two text boxes for User Name and Password.

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
    charset=UTF-8">
    <title>Login Page</title>
  </head>
  <body>
    <h1>Login Page</h1>
    <form method="post" action="Exe_5">
      <table cellpadding="0" cellspacing="0" border="0">
        <tr>
          <td>Enter User Name : </td>
          <td><input type="text"
            name="user_name"/>
        </tr>
        <tr>
          <td>Enter Password : </td>
          <td><input type="password"
            name="password"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="submit"
            value="Submit"/>
        </tr>
      </table>
    </form>
  </body>
</html>
```

II. Exe_5.java

```
package Exe_5;
```

```

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

/**
 *
 * @author Sharon Mohtra
 */
@WebServlet(name="Exe_5", urlPatterns={"/Exe_5"})
public class Exe_5 extends HttpServlet {
    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response) throws ServletException
    {
        String user_name,password;
        user_name = request.getParameter("user_name");
        password = request.getParameter("password");
        response.setContentType("text/html");
        PrintWriter printWriter;
        try
        {
            printWriter = response.getWriter();

            if(!user_name.equals("") && !password.equals(""))
            {
                printWriter.println("<title>Login Data</title>");
                printWriter.println("<p>");
                printWriter.print("Hello, ");
                printWriter.print(user_name);
                printWriter.print("</p>");

                printWriter.println("<p>");
                printWriter.print("Your Password Is :");
                printWriter.print(password);
                printWriter.print("</p>");
                printWriter.print("You Want TO <a
                    href='index.jsp'>Back</a>");
            }
            else
            {
                printWriter.print("Please Enter Username Or
                    Password !!!");

                RequestDispatcher
                rd=request.getRequestDispatcher("index.jsp");
                rd.include(request,response);
            }
        }
    }
}

```

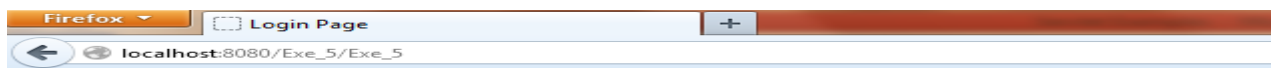
```
}  
catch (IOException e)  
{  
    e.printStackTrace();  
}  
}  
}
```

Output:

How to run this program.....

Step 1: Right click on your application.

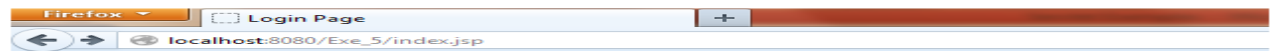
Step 2: Click on 'Run'.



Please Enter Username Or Password !!!

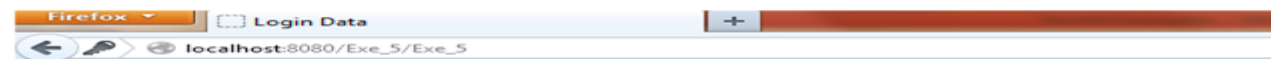
Login Page

Enter User Name :
Enter Password :



Login Page

Enter User Name : Sharon
Enter Password :



Hello, Sharon Mohtra

Your Password Is : Sharon111

Do You Want TO [Back](#) ?

6. Write a Servlet program which creates a session and display session information in the tabular format (session ID, session creation time, last accessed time, etc.).

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
    charset=UTF-8">
    <title>Login Page</title>
  </head>
  <body>
    <h1>Login Page</h1>
    <form method="post" action="Exe_6">
      <table cellpadding="0" cellspacing="0" border="0">
        <tr>
          <td>Enter User Name : </td>
          <td><input type="text"
            name="user_name"/>
        </tr>
        <tr>
          <td>Enter Password : </td>
          <td><input type="password"
            name="password"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="submit"
            value="Submit"/>
        </tr>
      </table>
    </form>
  </body>
</html>
```

II. Exe_6.java

```
package Exe_6;

import java.io.IOException;
import java.io.PrintWriter;
import java.util.Date;
```

```

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Exe_6", urlPatterns={"/Exe_6"})
public class Exe_6 extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            String name=request.getParameter("user_name");
            String pass=request.getParameter("password");
            HttpSession sos=request.getSession(true);
            Date one=new Date(sos.getCreationTime());
            Date two=new Date(sos.getLastAccessedTime());
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Servlet Session Example</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1 align=\"center\">Servlet session
example</h1>");
            out.println("<table border=\"1\" width=\"50%\"
align=\"center\">");
            out.println("<tr><th> Name
</th><th>Value</th></tr>");
            out.println("<tr><td> Session id
</td><td>"+sos.getId()+"</td></tr>");
            out.println("<tr><td> session creation
time</td><td>"+one.toString()+"</td></tr>"); //
            out.println("<tr><td> session Last access
time</td><td>"+two.toString()+"</td></tr>");
            out.println("<tr><td> User Name : </td><td>"+ name
+"</td></tr>");
            out.println("<tr><td> Password : </td><td>"+ pass
+"</td></tr>");
            out.println("</table>");
            out.println("</body>");
            out.println("</html>");
        } finally {
            out.close();
        }
    }
}

```



```

    }

    @Override
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }
}

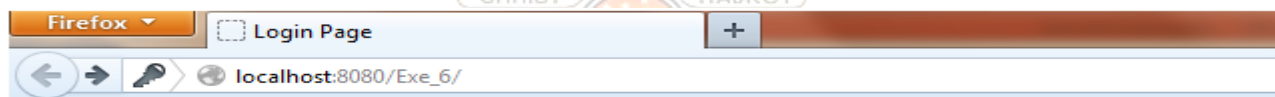
```

Output:

How to run this program...

Step 1: Right click on your application.

Step 2: Click on 'Run'.



Login Page

Enter User Name :

Enter Password :

Servlet session example

Name	Value
Session id	57805888a709d06ddb8237ab14c1
session creation time	Thu Sep 12 20:58:09 PDT 2013
session Last access time	Thu Sep 12 21:05:40 PDT 2013
User Name :	Sharon Mohtra
Password :	Sharon.Mohtra

7. Write a servlet to indicate page counter (or no. of times user has visited that page/ accessed the servlet). Take one Integer variable counter and show the message "This page has been accessed N times". Also print RemoteAddress and RemoteHostName in the web browser.

```
package Exe_7;

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Exe_7", urlPatterns={"/Exe_7"})
public class Exe_7 extends HttpServlet {
    private int count=0;
    public void init(){
        count =0;
    }
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            count++;
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Page Counter</title>");
            out.println("</head>");
            out.println("<body>");
            out.println("<h1>This Page Has Been Accessed "+ count + " Times </h1>");
            out.println("<h1>RemoteAddress : "+ request.getRemoteAddr() + " </h1>");
            out.println("<h1>RemoteHostName : "+ request.getRemoteHost() + " </h1>");
            out.println("</body>");
            out.println("</html>");
        } finally {
```

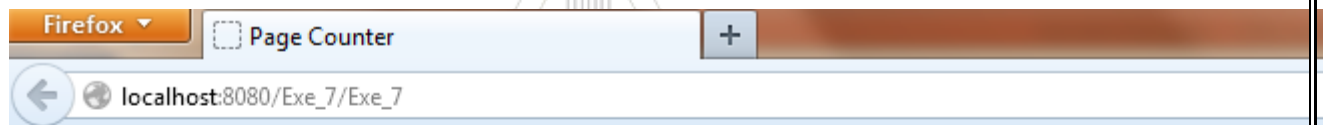
```
        out.close();
    }
}

@Override
protected void doGet(HttpServletRequest request, HttpServletResponse
response)
    throws ServletException, IOException {
    processRequest(request, response);
}

@Override
protected void doPost(HttpServletRequest request, HttpServletResponse
response)
    throws ServletException, IOException {
    processRequest(request, response);
}
}
```

Output:

How to run this program.....
on Step 1: If you do not see application folder hierarchical layering, click plus sign.
Step 2: Click on 'Source Packages'.
Step 3: Click on your package.
Step 4: Right click on java file and click on 'Run File'.



This Page Has Been Accessed 13 Times

RemoteAddress : 127.0.0.1

RemoteHostName : 127.0.0.1

8. Write a servlet to indicate page counter (or no. of times user has visited that page/ accessed the servlet). Take one Integer variable counter and show the message "This page has been accessed N times". Also print RemoteAddress and RemoteHostName in the web browser using init parameter method.

```
package Exe_8;

import java.io.IOException;
import javax.servlet.ServletConfig;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Exe_8", urlPatterns={"/Exe_8"})
public class Exe_8 extends HttpServlet {
    private int count;

    public void init(ServletConfig config) throws ServletException {
        super.init(config);
        count=0;
    }

    protected void service(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
        count++;
        response.getWriter().write("<html>");
        response.getWriter().write("<head>");
        response.getWriter().write("<title>Page Counter</title>");
        response.getWriter().write("</head>");
        response.getWriter().write("<body>");
        response.getWriter().write("<h1>This Page Has Been Accessed "+
            count +" Times </h1>");
        response.getWriter().write("<h1>RemoteAddress : "+
            request.getRemoteAddr() +" </h1>");
        response.getWriter().write("<h1>RemoteHostName : "+
            request.getRemoteHost() +" </h1>");
        response.getWriter().write("</body>");
        response.getWriter().write("</html>");
    }
}
```

Output:

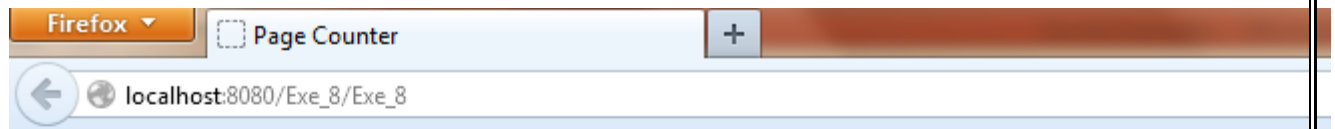
How to run this program.....

on Step 1: If you do not see application folder hierarchical layering, click plus sign.

Step 2: Click on 'Source Packages'.

Step 3: Click on your package.

Step 4: Right click on java file and click on 'Run File'.



This Page Has Been Accessed 1 Times

RemoteAddress : 127.0.0.1

RemoteHostName : 127.0.0.1



9. Create a servlet file and do the connectivity with the oracle/access/MySQL; Print all the records of the Student_Detail table in tabular format in web browser.

Fieldnames	Data type
Stud_Id	Number (Primary key)
Stud_Name	Text (Text Only)
Birth_Date	Date
City	Text
Course	Text
Semester	Number
Division	Text

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
<head>
<meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
<title>Fetch Data</title>
</head>
<body>
<table>
<tr>
<td>
<h2>Fetch Data Using : </h2>
</td>
<td>
<form action="Oracle" method="post">
<input type="submit" name="submit"
value="Oracle"/>
</form>
</td>
<td>
<form action="Access" method="post">
<input type="submit" name="submit"
value="Access"/>
</form>
</td>
<td>
<form action="Mysql" method="post">
<input type="submit" name="submit"
value="Mysql"/>
</form>
</td>
</tr>
</table>
```

```

</td>
</tr>
</table>
</body>
</html>

```

II. Oracle.java

```

package Exe_9;

import java.io.IOException;
import java.io.PrintWriter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import java.text.DateFormat;
import java.text.SimpleDateFormat;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Oracle", urlPatterns={"/Oracle"})
public class Oracle extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException, ClassNotFoundException,
        SQLException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            Class.forName("oracle.jdbc.driver.OracleDriver");
            Connection
            con=DriverManager.getConnection("jdbc:oracle:thin:@loc
            alhost:1521:xe","system","root");
            Statement st= con.createStatement();
            ResultSet rs = st.executeQuery("select * from
            Student_Detail");

            out.print("<title>Oracle</title>");
            out.print("<h1 align='\"center\"'>Student Data</h1>");
            out.print("<table border='\"1\"' align='\"center\"'
            width='\"50%\"'><tr>");
            out.print("<th>Student ID</th>");
            out.print("<th>Student Name</th>");
            out.print("<th>Birth Date</th>");

```

```

        out.print("<th>City</th>");
        out.print("<th>Course</th>");
        out.print("<th>Semester</th>");
        out.print("<th>Division</th>");
        out.print("</tr>");
        while(rs.next()){
            out.print("<tr><td>" + rs.getString("Stud_Id") + "</td>");
            out.print("<td>" + rs.getString("Stud_Name") + "</td>");
            DateFormat formatter = new
            SimpleDateFormat("dd/MM/yyyy");
            String Birth_Date =
            formatter.format(rs.getDate("Birth_Date"));
            out.print("<td>" + Birth_Date + "</td>");
            out.print("<td>" + rs.getString("City") + "</td>");
            out.print("<td>" + rs.getString("Course") + "</td>");
            out.print("<td>" + rs.getString("Semester") + "</td>");
            out.print("<td>" + rs.getString("Division") + "</td></tr>");
        };
        out.print("</table>");
        out.print("<p align=\"center\"><a
        href=\"index.jsp\">Back</a>");
        out.close();
        rs.close();
        con.close();
    } finally {
        out.close();
    }
}

```

```

@Override
protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    try {
        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Oracle.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(Oracle.class.getName()).log(Level.SEVERE, null, ex);
    }
}

```

```

@Override
protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    try {

```



```

        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Oracle.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(Oracle.class.getName()).log(Level.SEVERE, null, ex);
    }
}
}

```

III. Access.java

```

package Exe_9;

import java.io.IOException;
import java.io.PrintWriter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import java.text.DateFormat;
import java.text.SimpleDateFormat;
/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Access", urlPatterns={"/Access"})
public class Access extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException, ClassNotFoundException,
        SQLException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");
            Connection
            con=DriverManager.getConnection("jdbc:odbc:mydb");
            Statement st= con.createStatement();
            ResultSet rs = st.executeQuery("select * from
            Student_Details");

            out.print("<title>Access</title>");

```

```

        out.print("<h1 align=\"center\">Student Data</h1>");
        out.print("<table border=\"1\" align=\"center\"
width=\"50%\"><tr>");
        out.print("<th>Student ID</th>");
        out.print("<th>Student Name</th>");
        out.print("<th>Birth Date</th>");
        out.print("<th>City</th>");
        out.print("<th>Course</th>");
        out.print("<th>Semester</th>");
        out.print("<th>Division</th>");
        out.print("</tr>");
        while(rs.next()){
            out.print("<tr><td>"+rs.getString("Stud_Id")+"</td>");
            out.print("<td>"+rs.getString("Stud_Name")+"</td>");
            DateFormat formatter = new
            SimpleDateFormat("dd/MM/yyyy");
            String Birth_Date =
            formatter.format(rs.getDate("Birth_Date"));
            out.print("<td>"+Birth_Date+"</td>");
            out.print("<td>"+rs.getString("City")+"</td>");
            out.print("<td>"+rs.getString("Course")+"</td>");
            out.print("<td>"+rs.getString("Semester")+"</td>");
            out.print("<td>"+rs.getString("Division")+"</td></tr>");
        }
        out.print("</table>");
        out.print("<p align=\"center\"><a
href=\"index.jsp\">Back</a></p>");
        out.close();
        rs.close();
        con.close();
    } finally {
        out.close();
    }
}

```

```

@Override
protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    try {
        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Access.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(Access.class.getName()).log(Level.SEVERE, null, ex);
    }
}

```

```

@Override
protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    try {
        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Access.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(Access.class.getName()).log(Level.SEVERE, null, ex);
    }
}
}

```

IV. Mysql.java

```
package Exe_9;
```

```

import java.io.IOException;
import java.io.PrintWriter;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.sql.*;
import java.text.DateFormat;
import java.text.SimpleDateFormat;

```

```
/**
```

```
*
```

```
* @author Dr. Sharon V. Mohtra
```

```
*/
```

```
@WebServlet(name="Mysql", urlPatterns={"/Mysql"})
```

```
public class Mysql extends HttpServlet {
```

```
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
```

```
    throws ServletException, IOException, ClassNotFoundException,
        SQLException {
```

```
        response.setContentType("text/html;charset=UTF-8");
```

```
        PrintWriter out = response.getWriter();
```

```
        try {
```

```
            Class.forName("com.mysql.jdbc.Driver");
```

```
            Connection
```

```
            con=DriverManager.getConnection("jdbc:mysql://localhost:3306/student_management", "root", "");
```

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

```

ResultSet rs = st.executeQuery("select * from
Student_Details");

out.print("<title>Mysql</title>");
out.print("<h1 align=\"center\">Student Data</h1>");
out.print("<table border=\"1\" align=\"center\"
width=\"50%\"><tr>");
out.print("<th>Student ID</th>");
out.print("<th>Student Name</th>");
out.print("<th>Birth Date</th>");
out.print("<th>City</th>");
out.print("<th>Course</th>");
out.print("<th>Semester</th>");
out.print("<th>Division</th>");
out.print("</tr>");
while(rs.next()){
out.print("<tr><td>"+rs.getString("Stud_Id")+"</td>");
out.print("<td>"+rs.getString("Stud_Name")+"</td>");
DateFormat formatter = new
SimpleDateFormat("dd/MM/yyyy");
String Birth_Date =
formatter.format(rs.getDate("Birth_Date"));
out.print("<td>"+Birth_Date+"</td>");
out.print("<td>"+rs.getString("City")+"</td>");
out.print("<td>"+rs.getString("Course")+"</td>");
out.print("<td>"+rs.getString("Semester")+"</td>");
out.print("<td>"+rs.getString("Division")+"</td></tr>");
;
}
out.print("</table>");
out.print("<p align=\"center\"><a
href=\"index.jsp\">Back</a>");
out.close();
rs.close();
con.close();
} finally {
    out.close();
}
}

```

```

@Override
protected void doGet(HttpServletRequest request,
HttpServletResponse response)
throws ServletException, IOException {
    try {
        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Mysql.class.getName()).log(Level.SEVERE,
null, ex);
    } catch (SQLException ex) {

```

```

        Logger.getLogger(Mysql.class.getName()).log(Level.SEVERE, null, ex);
    }
}

@Override
protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    try {
        processRequest(request, response);
    } catch (ClassNotFoundException ex) {
        Logger.getLogger(Mysql.class.getName()).log(Level.SEVERE, null, ex);
    } catch (SQLException ex) {
        Logger.getLogger(Mysql.class.getName()).log(Level.SEVERE, null, ex);
    }
}
}

```

Output:

How to run this program.....

Step 1: Create table and insert data in Oracle

```

Create table Student_Detail(
    Stud_Id number(11) primary key,
    Stud_Name varchar2(25),
    Birth_Date date,
    City varchar2(20),
    Course varchar2(20),
    Semester number(2),
    Division varchar2(11)
);

```

```

insert into Student_Detail(
    Stud_Id, Stud_Name, Birth_Date, City, Course, Semester, Division
) values(1, 'Rejoice Mohtra', '14-AUG-93', 'Rajkot', 'BCA', 5, 'A');

```

Step 2: Create database, table and insert data in Access as above fields

Step 3: Create database, table and insert data in MySQL.

Database Name: student_management,

```

CREATE TABLE IF NOT EXISTS `Student_Details` (
  `Stud_Id` int(11) NOT NULL,
  `Stud_Name` varchar(25) DEFAULT NULL,
  `Birth_Date` date DEFAULT NULL,
  `City` varchar(20) DEFAULT NULL,

```

```

`Course` varchar(20) DEFAULT NULL,
`Semester` int(11) DEFAULT NULL,
`Division` varchar(11) DEFAULT NULL,
PRIMARY KEY (`Stud_Id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```

```

INSERT INTO `Student_Details` (`Stud_Id`, `Stud_Name`,
`Birth_Date`, `City`, `Course`, `Semester`, `Division`) VALUES
(1, 'Rejoice Mohtra', '1993-08-14', 'Rajkot', 'BCA', 5, 'A'),
(2, 'Sharon Mohtra', '1993-04-05', 'Rajkot', 'BCA', 5, 'B'),
(3, 'Rohini Mischell', '1995-08-02', 'Rajkot', 'BCA', 4, 'B');

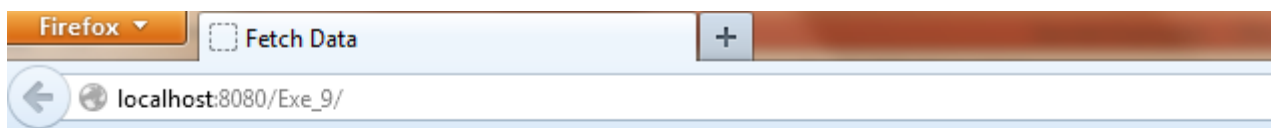
```

Step 4: Create DSN (Data Source Name) for Oracle And Access.

Step 5: Connect Database of MySQL in your application

Go to Services right click on database and click on 'New Connection...'

Step 6: Right Click on your application and click on 'Run'.



Fetch Data Using :

Oracle

Access

Mysql

Student Data

Student ID	Student Name	Birth Date	City	Course	Semester	Division
1	Rejoice Mohtra	14/08/1993	Rajkot	BCA	5	A
2	Sharon Mohtra	05/04/1993	Rajkot	BCA	5	B
3	Rohini Mischell	02/08/1995	Rajkot	BCA	4	B

[Back](#)

10. Write a program to create servlet for Hidden form Field and URLRewriting.

I. index.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
    <title>Login Page</title>
  </head>
  <body>
    <h1>Login Page</h1>
    <form method="post" action="Login">
      <table cellpadding="0" cellspacing="0" border="0">
        <tr>
          <td>Enter User Name : </td>
          <td><input type="text"
name="user_name"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="hidden"
name="password"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="submit"
value="Submit"/>
        </tr>
      </table>
    </form>
  </body>
</html>

```

II. Login.java

```

package Exe_10;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;

```

```

import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Login", urlPatterns={"/Login"})
public class Login extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            String name=request.getParameter("user_name");
            if(!name.equals(""))
            {
                out.println("<html>");
                out.println("<head>");
                out.println("<title>Hidden Form Field And
                URLRewriting</title>");
                out.println("</head>");
                out.println("<body>");
                out.println("<h1 align=\"center\">Hidden Form
                Field And URLRewriting Example</h1>");
                out.println("<table border=\"1\" width=\"50%\"
                align=\"center\">");
                out.println("<tr><th> Name
                </th><th>Value</th><th>Change
                Value</th></tr>");
                out.println("<tr><td> User Name : </td><td>"+
                name + "</td><td align=\"center\"><a
                href=\"Change_name_password?user_name=\""+
                name + "\">Click Me!</a></td></tr>");
                out.println("<tr><td> Password : </td><td>"+
                name + "</td><td align=\"center\"><a
                href=\"Change_name_password?user_name=\""+
                name + "\">Click Me!</a></td></tr>");
                out.println("</table>");
                out.print("<p align=\"center\"><a
                href=\"index.jsp\">Back</a></p>");

                out.println("</body>");
                out.println("</html>");
            }
            else
            {
                out.print("Please Enter Username Or Password
                !!!");
            }
        }
    }
}

```



```

        RequestDispatcher
        rd=request.getRequestDispatcher("index.jsp");
        rd.include(request,response);

    }
    } finally {
        out.close();
    }
}

@Override
protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

@Override
protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}
}

```

III. Change_name_password.java

```

package Exe_10;

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="Change_name_password",
    urlPatterns={"/Change_name_password"})
public class Change_name_password extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            String user_name = request.getParameter("user_name");

```

```

        out.print("<title>Change Name</title>");
        out.print("<h2>Change Name</h2>");
        out.print("<table>");
        out.print("<form method=\"post\" action=\"Login\">");
        out.print("<tr><td>Enter User Name : </td><td><input
        type=\"text\" name=\"user_name\" value=\"+
        user_name+\" /></td></tr>");
        out.print("<tr><td></td><td><input type=\"submit\"
        name=\"submit\" value=\"Submit\"/></td></tr>");
        out.print("</form>");
        out.print("</table>");
    } finally {
        out.close();
    }
}

@Override
protected void doGet(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}

@Override
protected void doPost(HttpServletRequest request,
    HttpServletResponse response)
    throws ServletException, IOException {
    processRequest(request, response);
}
}

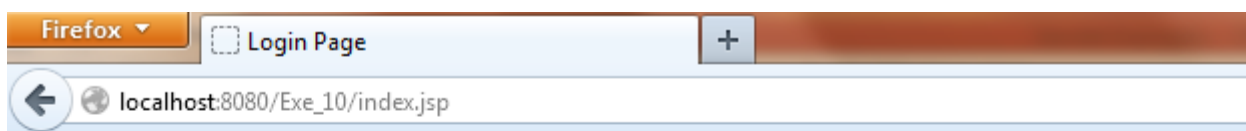
```

Output:

How to run this program.....

Step 1: Right click on your application.

Step 2: Click on 'Run'.



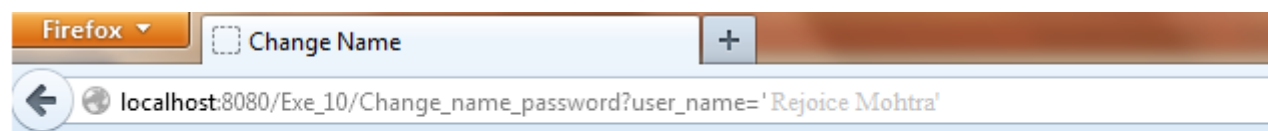
Login Page

Enter User Name :

Hidden Form Field And URLRewriting Example

Name	Value	Change Value
User Name :	Rejoice Mohtra	Click Me!
Password :	Rejoice Mohtra	Click Me!

[Back](#)



Change Name

Enter User Name :



11. Write a servlet program which adds the cookie and print the name and value of the cookie.

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
    charset=UTF-8">
    <title>Login Page</title>
  </head>
  <body>
    <h1>Login Page</h1>
    <form method="post" action="Exe_11">
      <table cellpadding="0" cellspacing="0" border="0">
        <tr>
          <td>Enter User Name : </td>
          <td><input type="text"
            name="user_name"/>
        </tr>
        <tr>
          <td></td>
          <td><input type="submit"
            value="Submit"/>
        </tr>
      </table>
    </form>
  </body>
</html>
```

II. Exe_11.java

```
package Exe_11;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.RequestDispatcher;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;
/**
 *
 */
```

```

* @author Dr. Sharon V. Mohtra
*/
@WebServlet(name="Exe_11", urlPatterns={"/Exe_11"})
public class Exe_11 extends HttpServlet {
    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response) throws ServletException
    {
        String user_name = request.getParameter("user_name");
        response.setContentType("text/html");
        PrintWriter printWriter;
        try
        {
            printWriter = response.getWriter();
            if(!user_name.equals(""))
            {
                Cookie ck = new Cookie("user_name",
                    user_name);
                response.addCookie(ck);

                printWriter.println("<p>");
                printWriter.print("Hello ");
                printWriter.print(user_name);
                printWriter.print("..... Do You Want To Set
                Cookie? Please Click <a
                href=\"SetCookie\">Here</a>");
                printWriter.print("</p>");
            }
            else
            {
                printWriter.print("Please Enter Username !!!");
                RequestDispatcher
                rd=request.getRequestDispatcher("index.jsp");
                rd.include(request,response);
            }
        }
        catch (IOException e)
        {
            e.printStackTrace();
        }
    }
}

```

III. SetCookie.java

```

package Exe_11;

import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;

```

```

import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;

/**
 *
 * @author Dr. Sharon V. Mohtra
 */
@WebServlet(name="SetCookie", urlPatterns={"/SetCookie"})
public class SetCookie extends HttpServlet {
    protected void processRequest(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            Cookie ck[] = request.getCookies();
            out.print("<h2>Your Cookie Set Successfully !!!</h2>");
            out.print("<p>Cookie Name : "+ck[0].getName()+"</p>");
            out.print("<p>Cookie Value : "+ck[0].getValue()+"</p>");
        } finally {
            out.close();
        }
    }
    @Override
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }

    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response)
        throws ServletException, IOException {
        processRequest(request, response);
    }
}

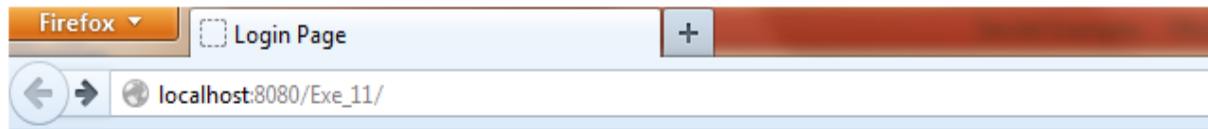
```

Output:

How to run this program.....

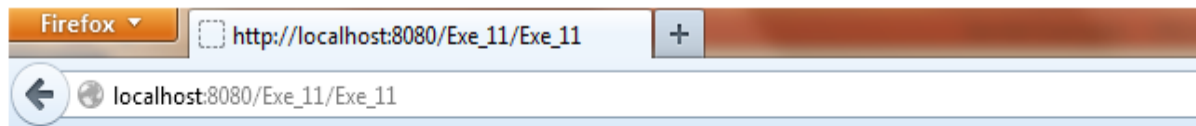
Step 1: Right click on your application.

Step 2: Click on 'Run'.

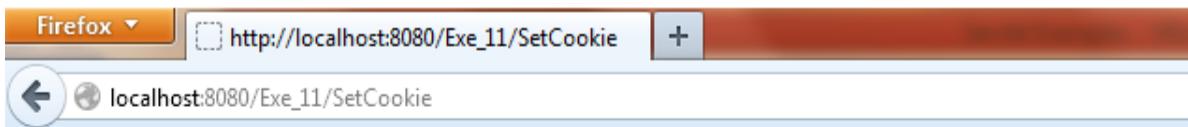


Login Page

Enter User Name :



Hello Rejoice Mohtra.. Do You Want To Set Cookie? Please Click [Here](#)



Your Cookie Set Successfully !!!

Cookie Name : user_name

Cookie Value : Rejoice Mohtra

12. Write a program to demonstrate include method of RequestDispatcher.

This example also seen in 'Exe_5', there we used **include RequestDispatcher** in 'Exe_5.java' else part

13. Write a program to demonstrate forward method of RequestDispatcher.

I. index.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
```

```

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
    charset=UTF-8">
    <title>Forward Method</title>
  </head>
  <body>
    <h2>Do You Want To Forward Page ?</h2>
    <form method="post" action="Exe_13">
      <input type="radio" name="forward" value="1"/> Yes
      <input type="radio" name="forward" value="2"/> No
      <input type="submit" name="submit" value="Submit">
    </form>
  </body>
</html>

```

II. forward.jsp

```

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">

<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html;
    charset=UTF-8">
    <title>Forward Page</title>
  </head>
  <body>
    <h1>Your Page Forward !!!!</h1>
  </body>
</html>

```

III. Exe_13.java

```

package Exe_13;

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

/**
 *
 * @author Dr. Sharon V. Mohtra
 */

```



```

@WebServlet(name="Exe_13", urlPatterns={"/Exe_13"})
public class Exe_13 extends HttpServlet {
    @Override
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response) throws ServletException
    {
        response.setContentType("text/html");
        PrintWriter printWriter;
        String forward = request.getParameter("forward");
        try
        {
            printWriter = response.getWriter();
            if(forward.equals("1")){
                RequestDispatcher
                rd=request.getRequestDispatcher("forward.jsp");
                rd.forward(request,response);
            }
            else{
                printWriter.println("<title>Forward Page</title>");
                printWriter.println("<h1>Your Page Not Forward
                !!!</h1>");
            }
        }
        catch (IOException e)
        {
            e.printStackTrace();
        }
    }
}

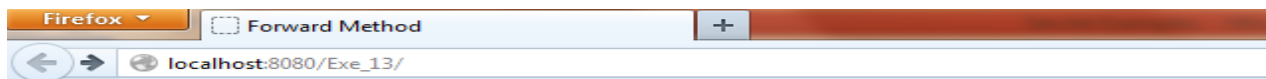
```

Output:

How to run this program.....

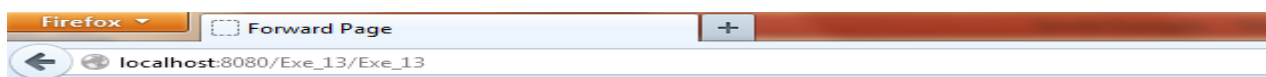
Step 1: Right click on your application.

Step 2: Click on 'Run'.



Do You Want To Forward Page ?

☒ Yes ☐ No



Your Page Forward !!!!
