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Master of Computer Application (MCA)-Semester -I
(Academic Year – 2023-24)

CA683: Enterprise Computing Using Java EE
Lab Work- 1 (JSP)

Q1.	Write a JSP code to display a Welcome message to the user and the current date.

	``jsp
	<%@page contentType="text/html" pageEncoding="UTF-8"%>
	<%@page import = "java.util.Date" %>
	<!DOCTYPE html>
	<html>
	  <head>
	    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
	    <title>Q1_Welcome_Page</title>
	  </head>
	  <body bgColor='coral'>
	
	    <%Date dt = new Date();%>
	     Today's Date and Time : <%=dt%>
	  </body>
	</html>
	``

Q2.	Write a JSP code to Perform Addition and Subtraction of two numbers in JSP.

	``jsp
	<%@page contentType="text/html" pageEncoding="UTF-8"%>
	<!DOCTYPE html>
	<html>
	  <head>
	    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
	    <title>Q2</title>
	  </head>
	  <body bgColor='black'>
	     The Summation Page
	    <%
	      int n1 = 50;
	      int n2 = 10;
	      int sum = n1+n2;
	      int sub = n1-n2;
	    %>
	
	     Addition = <%=sum%>
	     Substration = <%=sub%>
	  </body>
	</html>
	``

Q3.	Write a JSP code for passing values from one page to another page.

Input.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Q3 Input Page</title>
  </head>
  <body>
  <center><h1>The Calculator</h1></center>
    <form action="Q3_Output.jsp" method='Post'>
      <table  align='center'>
        <tr>
          <td>Number 1 : </td>
          <td><input  type='Number' name='fno'></td>
        </tr>
        <tr>
          <td>Number 2 : </td>
          <td><input  type='Number' name='sno'></td>
        </tr>
        <tr>
          <th colspan='2'><input type='Submit' Value='Submit'></th>
        </tr>
      </table>
    </form>
  </body>
</html>
```

Output.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Q3 Output PAge</title>
  </head>
    <body bgColor="black">
      <center><h1 style="color:coral">Output</h1></center>
    <%
      String num1 = request.getParameter("fno");
      String num2 = request.getParameter("sno");
      int ans = Integer.parseInt(num1)+Integer.parseInt(num2);
    %>
  <center><h1 style="color:gold">Your Addition Is : <%=ans%></h1></center>
    </body>
</html>
```

Q4.	Write a JSP code to fetch a record from the database with JSP JDBC Connectivity code.

	<%--
	  Document : Q4
	  Created on : Sep 28, 2023, 11:30:21 AM
	  Author : 2student84
	--%>

```jsp
<%--
   Document   : Q4
   Created on : Sep 28, 2023, 11:30:21 AM
   Author     : 2student84
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page import = "java.sql.*"%>
<%@page import = "java.io.IOException"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Q4 Database Table Display</title>
  </head>
  <body>
  <center> <h1>List of Student</h1></center>

    <%
        Connection con = null;
      try {
        //Loading driver
        Class.forName("oracle.jdbc.OracleDriver");
        //Building bridge between java & database
        con =
DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE", "system",
"system");
        //Building query
        String query = "Select * from Student5";
        //Firing query to database
        Statement stmt = con.createStatement();
        ResultSet rs = stmt.executeQuery(query);
      %>
      <table border = '1' align='center'>
        <tr>
          <th>Student ID</th>
          <th>Student Name</th>
          <th>Student Age</th>
        </tr>
      <%

      while (rs.next()) {
        String id = rs.getString("id");
        String age = rs.getString("age");
        String name = rs.getString("name");
      %>
        <tr>
```

```
            <td><%=id%></td>
            <td><%=name%></td>
            <td><%=age%></td>
          </tr>

        <%
          }

          rs.close();
          stmt.close();
          con.close();
        } catch (Exception e) {
          System.out.println(e);
        }
        %>
        </table>

    </body>
</html>
```

Q5.	Create Table Student (Id, Name, Marks1, Marks2, Marks 3). Write JSP application to insert data and display all data. Also, display each record contains a link to calculate total and percentage of particular student.

```
List.jsp :
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page import = "java.sql.*"%>
<%@page import = "java.io.IOException"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Q4 Database Table Display</title>
    </head>
    <body>
    <center> <h1>List of Student</h1></center>
    <center> <h1><a href="Add.jsp">Add New Student</a></h1></center>

        <%
            Connection con = null;
        try {
            //Loading driver
            Class.forName("oracle.jdbc.OracleDriver");
            //Building bridge between java & database
            con =
DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE", "system",
"system");
            //Building query
            String query = "Select * from StudentInfo";
            //Firing query to database
            Statement stmt = con.createStatement();
```

```jsp
            ResultSet rs = stmt.executeQuery(query);
          %>
          <table border = '1' align='center'>
            <tr>
              <th>Student ID</th>
              <th>Student Name</th>
              <th>Marks1</th>
              <th>Marks2</th>
              <th>Marks3</th>
              <th colspan="2">Actions</th>
            </tr>
          <%

          while (rs.next()) {
            String id = rs.getString("id");
            String name = rs.getString("name");
            String m1 = rs.getString("marks1");
            String m2 = rs.getString("marks2");
            String m3 = rs.getString("marks3");
          %>
          <tr>
            <td><%=id%></td>
            <td><%=name%></td>
            <td><%=m1%></td>
            <td><%=m2%></td>
            <td><%=m3%></td>
            <td><a href="Calculate.jsp?id=<%=id%>">Calculate</a></td>
          </tr>

        <%
          }

        rs.close();
        stmt.close();
        con.close();
      } catch (Exception e) {
%>

        <h1><%=e%></h1>

<%

      }
      %>
      </table>

   </body>
</html>

Calculate.jsp :
```

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page import = "java.sql.*"%>
<%@page import = "java.io.IOException"%>
<%@page import = "java.text.DecimalFormat"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>Result</title>
  </head>
  <body>
  <center><h1>Result</h1></center>
    <%
      if(request.getParameter("id") == null){
        response.sendRedirect("list.jsp");
      }
      else{
        int id = Integer.parseInt(request.getParameter("id"));


         Connection con = null;
      try {
        //Loading driver
        Class.forName("oracle.jdbc.OracleDriver");
        //Building bridge between java & database
        con =
DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE", "system",
"system");
        //Building query
        String query = "Select * from StudentInfo where id='"+id+"'";
        //Firing query to database
        Statement stmt = con.createStatement();
        ResultSet rs = stmt.executeQuery(query);
    %>
    <table border = '1' align='center'>
      <tr>
        <th>Student ID</th>
        <th>Student Name</th>
        <th>Marks1</th>
        <th>Marks2</th>
        <th>Marks3</th>
        <th colspan="2">Percentage</th>
      </tr>
      <%

      while (rs.next()) {
        String name = rs.getString("name");
        int m1 = Integer.parseInt(rs.getString("marks1"));
        int m2 = Integer.parseInt(rs.getString("marks2"));
        int m3 = Integer.parseInt(rs.getString("marks3"));
```

```
                float total = m1+m2+m3;
                float per = (total/300)*100;
                DecimalFormat df = new DecimalFormat();
                df.setMaximumFractionDigits(2);
            %>
            <tr>
              <td><%=id%></td>
              <td><%=name%></td>
              <td><%=m1%></td>
              <td><%=m2%></td>
              <td><%=m3%></td>
              <td><%=df.format(per)%></td>
            </tr>

            <%
              }

              rs.close();
              stmt.close();
              con.close();
            } catch (Exception e) {
            %>

            <h1><%=e%></h1>

            <%

                }
            %>
        </table>
        <%
      }
        %>
      </body>
</html>

Add.jsp:
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page import = "java.sql.*"%>
<%@page import = "java.io.IOException"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>Add</title>
    </head>
    <body>
    <center> <h1>Add of Student</h1></center>
        <%
          Connection con = null;
```

```
      int id=0;

    try
    {

        Class.forName("oracle.jdbc.OracleDriver");

        con =
DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE", "system",
"system");

        String query="Select max(id) maxnum from StudentInfo";
        //Firing query to database
        Statement stmt=con.createStatement();
        ResultSet rs=stmt.executeQuery(query);
        while(rs.next())
        {
           id=rs.getInt("maxnum");
        }
        rs.close();
        stmt.close();
        con.close();
    }
    catch(Exception e)
    {
        System.out.println(e);
    }
    id++;
    %>
   <form action="Insert.jsp">
     <table align="center">
       <tr>
          <td>Student ID</td>
          <td><input type="text" readonly name="id" value="<%=id%>"></td>
       </tr>
       <tr>
          <td>Student Name</td>
          <td><input type="text" name="stdName" required
placeholder="Name"></td>
       </tr>
       <tr>
          <td>Marks1</td>
          <td><input type="number" required name="marks1"
placeholder="Marks1"> </td>
       </tr>
       <tr>
          <td>Marks2</td>
          <td><input type="number" required name="marks2"
placeholder="Marks2"></td>
       </tr>
```

```
            <tr>
               <td>Marks1</td>
               <td><input type="number" required name="marks3"
placeholder="Marks3"></td>
            </tr>
            <tr colspan="2">
               <td><input type="submit" value="submit"></td>
            </tr>
         </table>
      </form>




</body>
</html>

Insert,jsp:
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@page import = "java.sql.*"%>
<%@page import = "java.io.IOException"%>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>JSP Page</title>
   </head>
   <body>
      <%
         Connection con = null;
            String id = request.getParameter("id");
   String name=request.getParameter("stdName");
   String marks1=request.getParameter("marks1");
   String marks2=request.getParameter("marks2");
   String marks3=request.getParameter("marks3");
   try
   {
      Class.forName("oracle.jdbc.OracleDriver");

      con = DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:XE",
"system", "system");
      //Building query
      String query="Insert into StudentInfo values(" + id + ",'" + name + "'," +
marks1 + "," + marks2 + "," + marks3 + ")";
      Statement stmt=con.createStatement();
      stmt.executeUpdate(query);
      stmt.close();
      con.close();
   }
   catch(Exception e){
      out.println(e);
```

```
    }
  response.sendRedirect("list.jsp");
   %>
     %>
   </body>
</html>
```

Q6.	Write a JSP application to demonstrate Session and Application Scope in JSP.

Application Scope :

Application1.jsp :

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'pink'>
        <form action="Application2.jsp" method = 'Post'>
        Enter message:<input type="text" name="message"><br>
        <input type="submit" value="Submit">
        </form>
    </body>
</html>
```

Application2.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor  = 'cyan'>
        <%
        String message=request.getParameter("message");
        application.setAttribute("msg", message);
        %>

        <form action="Applicaion3.jsp">
```

```
        <input type="submit" value="Submit">
      </form>
    </body>
</html>
```

Application3.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'yellow'>
        <%
        String
message=(String)application.getAttribute("msg");
        out.println(message);
        %>


        <form action="Application4.jsp">
        <input type="submit" value="Submit">
        </form>
    </body>
</html>
```

Application4.jsp:

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'magento'>
        <br><br><br>

         <%
        String
message=(String)application.getAttribute("msg");
        out.println(message);
        %>
    </body>
```

```
</html>
```

Session Scope :

Session1.jsp:

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'cyan'>
        <form action="Session2.jsp" method ='Post'>
        Name: <input type="text" name="uname"><br>
        Password:<input type="password" name="pass"><br>

         <input type="submit" value="Submit">
        </form>

    </body>
</html>
```

Session2.jsp:

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'yellow'>

      <%
      String uname = request.getParameter("uname");
      String pass = request.getParameter("pass");
      session.setAttribute("uid", uname);
      session.setAttribute("pwd", pass);
      %>
```

```html
        <form action="Session3.jsp">
            <input type="submit" value="Submit">
        </form>
    </body>
</html>
```

Session3.jsp:

```html
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'pink'>
        <%
        String user=(String)session.getAttribute("uid");
        String
password=(String)session.getAttribute("pwd");

        out.println("Hello " + user + "<br>");
        out.println("Your password is: " + password + "<br>");
        %>
        <form action="Session4.jsp">
            <input type="submit" value="Submit">
        </form>

    </body>
</html>
```

Session4.jsp:

```html
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor = 'magento'>

        <%
```

```
              String user=(String)session.getAttribute("uid");
              String password=(String)session.getAttribute("pwd");
       %>


       <br><br><br>
       Hello <%=user %>
       <br>
       Your password is: <%=password %>
       </body>
</html>
```

Q7.	Write a JSP to print hit count of the application?

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body>
    <%

    Integer hitsCount = (Integer)application.getAttribute("hitCounter");
    if( hitsCount ==null || hitsCount == 0 ) {
      hitsCount = 1;
    } else {
      hitsCount += 1;
    }
    application.setAttribute("hitCounter", hitsCount);

    %>

    <h1>The number of users login into our application:<%= hitsCount %></h1>
    </body>
</html>
```

Q8.	Write a JSP to display the number of requests in the current session?

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%
  Integer count = (Integer) session.getAttribute("count");
  if (count == null) {
    count = 0;
  }
  count++;
  session.setAttribute("count", count);
%>
<html>
<body>
  <h2>Number of requests in the current session: <%= count %></h2>
```

	```</body>``` ```</html>```
Q9.	Write a JSP to print number of users login into our application?
Q10.	Write a JSP code to demonstrate attributes of Page directive such as: **info: ,session: , error page:, content type:**

	1.info :
	
	```<%@page contentType="text/html" pageEncoding="UTF-8"%>```
	```<%@page import="jakarta.servlet.Servlet"%>```
	```<%@page info="hello world from info" %>```
	```<html>```
	```<body>```
	
	``` Info Page ```
	```<%```
	``` String info = getServletInfo();```
	```%>```
	``` <%=info%> ```
	```</body>```
	```</html>```
	
	2. session :
	```<%@ page session="false" %>```
	```<html>```
	```<head>```
	```<title>Session Example</title>```
	```</head>```
	```<body>```
	``` This page does not use session management ```
	```</body>```
	```</html>```
	
	3. error page:
	```<%@ page errorPage="myerrorpage.jsp" %>```
	```<html>```
	```<body>```
	
	```<%= 100/1 %>```
	
	```</body>```
	```</html>```
	
	myerrorpage.jsp :
	```<%@page contentType="text/html" pageEncoding="UTF-8"%>```
	```<!DOCTYPE html>```
	```<html>```

```
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  <title>JSP Page</title>
</head>
<body>
  <h1>You cannot divide by 0</h1>
</body>
</html>

4. content-type :
<%@ page contentType="text/html" %>
<html>
<body>

  <h1>Content type page</h1>
</body>
</html>
```

Q11.	Write a code to demonstrate include directive in JSP.

One1.jsp
```
<%--
  Document   : One1
  Created on : Sep 27, 2023, 2:45:40 PMja
  Author     : CHARUSAT
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body bgcolor='cyan'>

                Before Inclusion !!!!
                <br>
                <%@ include file ="Two2.jsp"  %>

  <br>
                After Inclusion!!!!
  </body>
</html>
```

Two.2jsp:
```
<%--
  Document   : Two2
```

```
    Created on : Sep 27, 2023, 2:45:52 PM
    Author    : CHARUSAT
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<! DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>JSP Page</title>
   </head>
   <body bgcolor='red'>
        This is Two.jsp !!!!
   </body>
</html>
```

Q12.	Write a code to demonstrate include & forward action in JSP.

Include Action:

Platform.jsp:

```
<%--
   Document   : Platform
   Created on : Sep 29, 2023, 1:17:17 PM
   Author    : CHARUSAT
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>JSP Page</title>
   </head>
   <body bgcolor="lightblue">
      <br><br>
      This is Platform Selection Page
      <br><br>Detail
      <form action="Details.jsp">
      Choose Platform:
      <input type="radio" name="plat" value="Sun">Sun
      <input type="radio" name="plat" value="Micro">Microsoft<br><br>
      <input type="submit" value="Submit">
      </form>
   </body>
</html>
```

Details.jsp:

```jsp
<%--
    Document   : Details
    Created on : Sep 29, 2023, 1:18:09 PM
    Author     : CHARUSAT
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
      This is Details.jsp!!
      <br>
      <%
       String plat = request.getParameter("plat");
       if (plat.equals("Sun")) {
       %>
       <jsp:include page="Sun.jsp" />
       <%
          }else{
      %>
      <jsp:include page="Micro.jsp" /><%
          }
%>
    </body>
</html>
```

Sun.jsp:

```jsp
<%--
    Document   : Sun
    Created on : Sep 29, 2023, 1:19:08 PM
    Author     : CHARUSAT
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <body bgcolor ='cyan'>
       Available Courses:
       <br> Core Java
       <br> Adv Java
    </body>
</html>
```

Micro.jsp

```jsp
<%--
    Document   : Micro
    Created on : Sep 29, 2023, 1:37:07 PM
```

```
     Author    : CHARUSAT
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <body bgcolor='yellow'>
    Available Courses:
    <br> VB.Net
    <br> ASP.Net
    </body>
</html>
```

Forward Action:

User.jsp:

```
<%--
  Document   : User
  Created on : Sep 30, 2023, 1:47:45 PM
  Author     : CHARUSAT
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>JSP Page</title>
   </head>
   <body bgcolor ='lightblue'>
     <form action="Check.jsp">
     Name:
     <input type="text" name="uname"><br>
     Password:
     <input type="password" name="pass"><br>
     <br>
     Choose gender:
     <input type="radio" name="gender" value="Male">Male
     <input type="radio" name="gender" value="Female">Female
     <br><br>

     <input type="submit" value="Submit">

     </form>

   </body>
</html>
```

Check.jsp:

```jsp
<%--
    Document   : Check
    Created on : Sep 30, 2023, 1:49:21 PM
    Author     : CHARUSAT
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
    <br>
    <%
        String gender = request.getParameter("gender");
        if (gender.equals("Male")) {
    %>
        <jsp:forward page="Male.jsp" />
        <%
            }else{
    %>
        <jsp:forward page="Female.jsp" /><%
            }
%>
    </body>
</html>
```

Male.jsp

```jsp
<%--
    Document   : Male
    Created on : Sep 30, 2023, 1:49:40 PM
    Author     : CHARUSAT
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor="cyan">
        Hello <%=request.getParameter("uname") %>
        <br>
        Your password is: <%=request.getParameter("pass") %>
        <br>
        This is page for male.
```

```
      </body>
    </html>

    Female.jsp
    <%--
      Document   : Female.jsp
      Created on : Sep 30, 2023, 1:49:53 PM
      Author     : CHARUSAT
    --%>

    <%@page contentType="text/html" pageEncoding="UTF-8"%>
    <!DOCTYPE html>
    <html>
      <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
      </head>
      <body>
        <body bgcolor="yellow">

        Hello <%=request.getParameter("uname") %>
        <br>
        Your password is: <%=request.getParameter("pass") %>
        <br>
        This is page for female.

      </body>
    </html>
```

Q13.	Write a code to demonstrate the use of useBean action tag in JSP.

useBean Action Tag:

Student.java
```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt
 to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit
 this template
 */
package kkbean;

import java.io.Serializable;
public class Student  implements Serializable{

    private int sno;

    private String sname;
```

```java
    private int age;

    public Student()

    {

    }

    public Student(int sno, String sname, int age) {
        this.sno = sno;
        this.sname = sname;
        this.age = age;
    }

    public int getSno() {
        return sno;
    }

    public void setSno(int sno) {
        this.sno = sno;
    }

    public String getSname() {
        return sname;
    }

    public void setSname(String sname) {
        this.sname = sname;
    }

    public int getAge() {
        return age;
    }

    public void setAge(int age) {
        this.age = age;

    }
}
```

Bean1.jsp:

```jsp
<%--
    Document   : Bean1
    Created on : Oct 3, 2023, 11:52:56 AM
    Author     : CHARUSAT
--%>
<%@page import = "kkbean.Student" %>
```

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP Page</title>
  </head>
  <body bgcolor='cyan'>
    <jsp:useBean  id="stud"  class="kkbean.Student" scope="session">
      <jsp:setProperty name="stud" property="sno" value="101" />
      <jsp:setProperty name="stud" property="sname" value="KK" />
      <jsp:setProperty name="stud" property="age" value="36" />
    </jsp:useBean>


      <table border='0' >
      <tr>
      <th>STUDENT TABLE</th>
      </tr>
      </table>
      <table border='1'>
      <tr>
      <th>Serial No</th>
      <th>Student Name</th>
      <th>Age</th>
      </tr>
      <td>
<%
      out.println(stud.getSno());
%>
        </td>
        <td>
<%
                    out.println(stud.getSname());
%>
      </td>

        <td>
<%
        out.println(stud.getAge());
%>
      </td>

  </tr>
</table>
<form action="Bean2.jsp">
<input type="submit" value="Submit">
</form>
</body>
```

```
</html>
```

Bean2.jsp:

```
<%--
    Document   : Bean2
    Created on : Oct 3, 2023, 11:53:07 AM
    Author     : CHARUSAT
--%>
<%@page import = "kkbean.Student" %>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor="yellow">

<jsp:useBean id="stud" class="kkbean.Student"  scope="session" >
</jsp:useBean >

<br><br><br>

    <table border='0' >
     <tr>
     <th>STUDENT TABLE</th>
     </tr>
    </table>
     <table border='1'>
     <tr>
     <th>Student No</th>
     <th>Student Name</th>
     <th>Age</th>
     </tr>
     <td>
<%
     out.println(stud.getSno());
%>
     </td>
     <td>
<%
     out.println(stud.getSname());
%>
     </td>

      <td>
<%
```

| | ```
        out.println(stud.getAge());
%>
        </td>
    </tr>
</table>

Student No:
<jsp:getProperty name="stud" property="sno" /><br>

Student Name:
<jsp:getProperty name="stud" property="sname" /><br>

Student Age:
<jsp:getProperty name="stud" property="age" /><br>

</body>

</html>
``` |
| **Q14.** | Write a code to implement MVC in JSP. |
| | ## Model:<br>### Students.java<br><br>```
package KK;
import java.sql.*;
/**
 *
 * @author CHARUSAT
 */
public class Student {

  ResultSet getStudList()
  {
   Connection con;

   try
    {
      Class.forName("oracle.jdbc.OracleDriver");
      con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:
XE","KK","KK");

      String query="Select * from Student order by Sno";

      Statement stmt=con.createStatement();
      ResultSet rs=stmt.executeQuery(query);

      return rs;
    }
``` |

```
        catch(Exception e)
        {
         System.out.println(e);
         return null;
        }
    }

}
```

View:
Start.jsp:

```jsp
<%--
   Document   : Start
   Created on : Oct 3, 2023, 9:42:55 PM
   Author     : CHARUSAT
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor='yellow'>
        <h1><a href="Controller?oper=List">Get Student List</a></h1>
    </body>
</html>
```

Controller :
Controller.java

```java
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt
to change this license
 * Click nbfs://nbhost/SystemFileSystem/Templates/JSP_Servlet/Servlet.java to
edit this template
 */
package KK;

import jakarta.servlet.RequestDispatcher;
import jakarta.servlet.ServletException;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.*;
```

```java
public class Controller extends HttpServlet {

    @Override
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        out.println("<html>");
        out.println("<body>");

        String oper=request.getParameter("oper");
        if(oper.equals("List"))
         {
          Student s = new Student();
          ResultSet rs=s.getStudList();
          request.setAttribute("List", rs);
          RequestDispatcher rd=request.getRequestDispatcher("List.jsp");
          rd.forward(request, response);
         }

        out.println("</body>");
        out.println("</html>");
    }
}
```

View
List.jsp

```jsp
<%--
    Document   : List
    Created on : Oct 3, 2023, 9:53:46 PM
    Author     : CHARUSAT
--%>
<%@page import="java.sql.*"  %>
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <body bgcolor = 'cyan'>
    <center><h1> MVC Demonstration</h1> </center>
      <%
       ResultSet rs=(ResultSet)request.getAttribute("List");
      %>

<table border="0" align='center'>
<tr>
    <th>STUDENT TABLE</th>
```

```
</tr>
</table>
<table border="1" align='center'>
<tr>
<th>Student No</th>
<th>Student Name</th>
<th>Student Age</th>
</tr>

<%
    while(rs.next())
     {
%>

<tr>
<td> <%=rs.getString("Sno") %> </td>
<td> <%=rs.getString("Sname") %> </td>
<td> <%=rs.getString("Sage") %> </td>
</tr>

<%
     }
%>

</table>

    </body>
</html>
```

Q15.	Write a jsp code to demonstrate the session tracking technique : Session & Cookies .

Session:

Session1.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
        <body bgcolor ='cyan'>
        <form action='Session2.jsp'>
        Name: <input type='text' name='uname'><br>
```

```
        Password: <input type='password' name='pass'><br>
        <input type='submit' value='Submit'><br>
        </form>

    </body>
</html>
```

Session2.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor="cyan">
        <%
        String uname=request.getParameter("uname");
        String pass=request.getParameter("pass");
        session.setAttribute("uid", uname);
        session.setAttribute("pwd", pass);
        %>
        <form action='Session3.jsp'>
        <input type='submit' value='Submit'>
        </form>
    </body>
</html>
```

Session3.jsp :

```jsp
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor="magento">
        <%
        String user=(String)session.getAttribute("uid");
```

```
        String password=(String)session.getAttribute("pwd");
        %>
        Hello <%=user%> <br>
        Your password is: <%=password%> <br>
        <form action='Session4.jsp'>
        <input type='submit' value='Submit'>
        </form>
    </body>
</html>
```

Session4.jsp :

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body bgcolor="lightblue">
        <%
        String user=(String)session.getAttribute("uid");
        String password=(String)session.getAttribute("pwd");
        %>
        Hello: <%=user%> <br>
        Your password is:<%=password%> <br>

    </body>
</html>
```

Cookie :

Cookie1.jsp :

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
```

```html
    <body>
        <body bgcolor ='cyan'>
        <form action='Cookie2.jsp'>
        Name: <input type='text' name='uname'><br>
        Password: <input type='password' name='pass'><br>
        <input type='submit' value='Submit'><br>
        </form>
    </body>
</html>
```

Cookie2.jsp:

```html
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <%
            String uname=request.getParameter("uname");
            String pass=request.getParameter("pass");
            Cookie c1=new Cookie("UserName", uname);
            Cookie c2=new Cookie("Password", pass);
            response.addCookie(c1);
            response.addCookie(c2);
            %>
        <form action='Cookie3.jsp'>
        <input type='submit' value='Submit'>
        </form>
    </body>
</html>
```

Cookie3.jsp:

```html
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
```

```html
            <title>JSP Page</title>
    </head>
    <body>
        <%
        Cookie arr[ ]=request.getCookies();
        for(int i=0; i<arr.length; i++)
         {
           if(arr[i].getName().equals("UserName"))
                out.println( "Welcome :" + arr[i].getValue() +
"<br>");
        }
        %>
        <form action='Cookie4.jsp'>
        <input type='submit' value='Submit'>
        </form>
    </body>
</html>
```

Cookie4.jsp:

```html
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html;
charset=UTF-8">
        <title>JSP Page</title>
    </head>
    <body>
        <%
        Cookie arr[ ]=request.getCookies();
        for(int i=0; i<arr.length; i++)
         {
           if(arr[i].getName().equals("UserName"))
                out.println( "Welcome :" + arr[i].getValue() +
"<br>");
        }
        %>
    </body>
</html>
```