

## Practical 5 – Working with JSP and JSTL

### Theory :-

#### What is JSP?

#### What are the elements of JSP?

#### Write about JSTL

**5a. Create an html page with fields, eno, name, age, desg, salary. Now on submit this data to a JSP page which will update the employee table of database with matching eno.**

```
create table emp(empid varchar(10) PRIMARY KEY, ename varchar(50), salary varchar(50),age varchar(50) );
insert into emp values('1','aaa','221234','11') ;
insert into emp values('2','bbb','334567','22') ;
insert into emp values('3','ccc','44454','33') ;
insert into emp values('4','ddd','55123','44');
```

#### Index5a.html

```
<html>
<body>
<form action="UpdateEmp.jsp" >
  Enter Employee Number<input type="text" name="txtEno" ><br>
  Enter Name<input type="text" name="txtName" ><br>
  Enter age<input type="text" name="txtAge" ><br>
  Enter Salary<input type="text" name="txtSal" ><br>
  <input type="reset" ><input type="submit">
</form>
</body>
</html>
```

#### UpdateEmp.jsp

```
<%@page contentType="text/html" import="java.sql.*" %>
<html>
<body>
<h1>Updating Employee Record</h1>
<%
String eno=request.getParameter("txtEno");
String sal = request.getParameter("txtSal");
try {
Class.forName("com.mysql.jdbc.Driver");
Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb?autoReconnect=true&useSSL=false","root",
"tiger");
PreparedStatement stmt = con.prepareStatement("select * from emp where empid=?");
stmt.setString(1, eno);
ResultSet rs = stmt.executeQuery();
if(rs.next()){
out.println("<h1> Employee "+rs.getString(2)+" Exist </h1>");
PreparedStatement pst= con.prepareStatement("update emp set salary=? where empid=?");
pst.setString(1, sal);
pst.setString(2, eno);
pst.executeUpdate();
out.println("<h1>Employee Record updated !!!!!</h1>");
}
else {
out.println("<h1>Employee Record not exist !!!!!</h1>");
}
} catch (Exception e) {out.println(e);}
}%>
```

```
</body>
```

```
</html>
```

### **Q.5 b) Create a JSP application to demonstrate the use of JSTL.**

#### **Index5c.html**

```
<html><body>
```

```
<a href="setDemo.jsp"> SetDemo</a>
```

```
<a href="Maxif.html"> MaxIF</a>
```

```
<a href="ForeachDemo.jsp"> ForEachDemo</a>
```

```
<a href="outDemo.jsp"> OutDemo</a>
```

```
<a href="URLDemo.jsp"> URLDemo</a>
```

```
<a href="choose_when_otherwise.jsp"> choose_when_otherwise</a>
```

```
</body></html>
```

#### **setDemo.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jstl/core" %>
```

```
<c:set var="pageTitle" scope="application"
value="Dukes Soccer League: Registration" />
${pageTitle}
```

#### **Maxif.html**

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

```
x=<input type="text" name="x" /><br>
```

```
y=<input type="text" name="y" /><br>
```

```
<input type="submit" value="Check Max" />
```

```
</form>
```

#### **IFDemo.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:set var="x" value="${param.x}" />
```

```
<c:set var="y" value="${param.y}" />
```

```
<c:if test="${x>y}">
```

```
<font color="blue"><h2>The Ans is:</h2></font>
```

```
<c:out value="${x} is greater than ${y}" />
```

```
</c:if>
```

```
<c:if test="${x<y}">
```

```
<font color="blue"><h2>The Ans is:</h2></font>
```

```
<c:out value="${x} is Less than ${y}" />
```

```
</c:if>
```

```
<c:if test="${x=y}">
```

```
<font color="blue"><h2>The Ans is:</h2></font>
```

```
<c:out value="${x} is equals ${y}" />
```

```
</c:if>
```

#### **ForeachDemo.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:forEach begin="1" end="10" var="i">
```

```
The Square of <c:out value=" ${i}=${i*i}" /><br>
```

```
</c:forEach>
```

#### **outDemo.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:set var="name" value="John" />
```

```
My name is: <c:out value=" ${name}" />
```

#### **URLDemo.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:url value="/index5c.html" />
```

**choose\_when\_otherwise.jsp**

```
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:set var="income" value="{4000*4}"/>
```

```
Your Income is: <c:out value="{income}"/>
```

```
<c:choose>
```

```
<c:when test="{income <=1000}">
```

```
Income is not good
```

```
</c:when>
```

```
<c:when test="{income > 10000}">
```

```
Income is Very Good
```

```
</c:when>
```

```
<c:otherwise>
```

```
Income is undetermined
```

```
</c:otherwise>
```

```
</c:choose>
```

For D.G. Ruparel College Students Only

## Practical 6 – Working with EJB

### Theory –

### What is EJB?

### Types of EJB

a) Create a Currency Converter application using EJB.

#### Index.html

```
<html><head><title>Currency Converter</title></head>
<body>
<form action="CCServlet" >
Enter Amount <input type="text" name="amt"><br>
Select Conversion Type
<input type="radio" name="type" value="r2d" checked>Rupees to Dollar
<input type="radio" name="type" value="d2r" >Dollor to Rupees<br>
<input type="reset" ><input type="submit" value="CONVERT" >
</form>
</body>
</html>
```

#### CCServlet.java

```
package mypack;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import javax.ejb.EJB;
import mybeans.CCBean;
import javax.servlet.annotation.WebServlet;
@WebServlet(urlPatterns = {"/CCServlet"})
public class CCServlet extends HttpServlet {
    @EJB CCBean obj;
    public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        double amt = Double.parseDouble(request.getParameter("amt"));
        if(request.getParameter("type").equals("r2d"))
        {
            out.println("<h1>"+amt+ " Rupees = "+obj.r2Dollar(amt)+" Dollors</h1>");
        }
        if(request.getParameter("type").equals("d2r"))
        {
            out.println("<h1>"+amt+ " Dollors = "+obj.d2Rupees(amt)+" Rupees</h1>");
        }
    }
}
```

#### CCBean.java

```
package mybeans;
import javax.ejb.Stateless;
@Stateless
public class CCBean {
    public CCBean(){}
    public double r2Dollar(double r){ return r/65.65; }
    public double d2Rupees(double d){ return d*65.65; }
}
```

**b) Develop a Simple Room Reservation System Application Using EJB.**

Create table roombook(RoomId varchar(4) PRIMARY KEY, RoomType varchar(20), charges numeric(10,2), cust varchar(20), mob varchar(20), status varchar(10)) ;

```
insert into roombook values('1001','Delux',5000.00,"","Not Booked") ;
insert into roombook values('1002','Super Delux',7000.00,"","Not Booked");
insert into roombook values('1003','Suit',9500.00,"","Not Booked") ;
insert into roombook values('2001','Delux',5000.00,"","Not Booked");
insert into roombook values('2002','Super Delux',7000.00,"","Not Booked") ;
insert into roombook values('2003','Suit',9500.00,"","Not Booked") ;
```

-----RoomBook.html -----

```
<form action='RBServlet' >
Select a room Type
<input type="radio" name="txtType" value="Delux">Delux
<input type="radio" name="txtType" value="Super Delux">Super Delux
<input type="radio" name="txtType" value="Suit">Suit<br>
Enter Your Name <input type="text" name="txtCust" ><br>
Enter Mobile No. <input type="text" name="txtMob" ><br>
<input type="reset" ><input type="submit" value="BookRoom">
</form>
```

-----RBServlet-----

```
package mypack;
import java.io.*;
import jakarta.servlet.*;
import jakarta.servlet.http.*;
import jakarta.ejb.EJB;
import mybeans.RRBean;
import jakarta.servlet.annotation.WebServlet;
@WebServlet("/")
public class RBServlet extends HttpServlet {
    @EJB RRBean obj;
    public void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException{
        PrintWriter out=response.getWriter();
        String rt=request.getParameter("txtType");
        String cn=request.getParameter("txtCust");
        String cm=request.getParameter("txtMob");
        String msg = obj.roomBook(rt, cn, cm);
        out.println("<html><body bgcolor=yellow text=red><h1>");
        out.println(msg);
        out.println("</h1></body></html>");
    }
}
```

-----RRBean.java -----

```
package mybeans;
import jakarta.ejb.Stateless;
import jakarta.ejb.LocalBean;
import java.sql.*;

@Stateless
@LocalBean
public class RRBean {
    public RRBean(){}
    public String roomBook(String rt, String cn, String cm){
        String msg="";
        try{
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con;
```

```

con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb?autoReconnect=true&useSSL=false", "root"
, "tiger");
String query="select * from roombook where RoomType=? and status='Not Booked'";
PreparedStatement pst = con.prepareStatement(query);
pst.setString(1,rt);
ResultSet rs= pst.executeQuery();
if(rs.next()){
String rno=rs.getString(1);
PreparedStatement stm1 = con.prepareStatement("update roombook set cust=? where RoomId=? ");
PreparedStatement stm2 = con.prepareStatement("update roombook set mob=? where RoomId=? ");
PreparedStatement stm3 = con.prepareStatement("update roombook set status=? where RoomId=? ");
stm1.setString(1,cn); stm1.setString(2,rno);
stm2.setString(1,cm); stm2.setString(2,rno);
stm3.setString(1, "Booked"); stm3.setString(2,rno);
stm1.executeUpdate();
stm2.executeUpdate();
stm3.executeUpdate();
msg = "Room "+rno+ " Booked. The Charges are "+rs.getString(3);
}
else
{
msg = "Room "+rt+ " currently Not available";
}
} catch(Exception e){msg=""+"e;"}
return msg;}}

```