\_\_\_\_\_\_\_\_\_\_\_

1. Create a servlet for a login page. If the username and password are correct then

it says message "Hello <username>" else a message "login failed"

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

<store/form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

2. Develop a simple JSP application to display values obtained from the use of

implicit objects of various types.

**CODE:**

**index.jsp**

<html>

<body>

<form action="implicitObjectEx.jsp">

Enter your name:<input type="text" name="myname"><br> Enter your email id:<input type="text" name="mymailid"><br>

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

</form>

</body>

</html>

## implicitObjectEx.jsp

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<html>

<head>

<title>JSP Page</title>

</head>

<body>

<h1>Use of Intrinsic Objects in JSP</h1>

<h1>Request Object</h1>

Query String<%=request.getQueryString() %><br> Context Path<%=request.getContextPath() %><br> Remote Host<%=request.getRemoteHost() %><br>

<h1>Response Object</h1>

Character Encoding Type<%=response.getCharacterEncoding() %><br> Content Type <%=response.getContentType() %><br>

Locale <%=response.getLocale() %><br

<h1>Session Object</h1> ID<%=session.getId() %><br>

Creation Time<%=new java.util.Date(session.getCreationTime()) %><br>

Last Access Time<%=new java.util.Date(session.getLastAccessedTime()) %><br>

</body>

</html>

\_\_\_\_\_\_\_\_\_\_\_\_

1.Create a registration servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database.

**MySql Command from mysql software:-**

* + 1. Select **services ->** expand **databases** -> right click on **MySQL server at localhost:3306[disconnected] ->** click on **connect ->** enter password **(tiger)** -> OK
    2. Again right click on **MySQL server at localhost:3306 ->** select **Create database ->** enter database name and select the check box to grant permission.
    3. Right click on **Table** under your daatbase
    4. Enter table name user by replacing untitled. Click on **Add column,** name -> username, type-> varchar, size-> 20, select checkbox of primary key, again click on **Add column** password varchar size 20, again click on **Add column** emailid varchar(20), again click **Add column** country varchar 10;
    5. add mysql-connector to library folder of the current application

## index.html

<html>

<body>

<form action="RegistrationServlet" method="post">

User name : <input type="text" name="uname"> <br> Password : <input type="password" name="pw"><br> Email Id : <input type="text" name="email"> <br> Country : <select name="coun">

<option>select...

<option> India

<option> Bangladesh

<option> Bhutan

<option> Canada

</select> <br>

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

</form>

</body>

</html>

## RegistrationServlet.java

import java.io.\*; import java.sql.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class RegistrationServlet extends HttpServlet

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

{ Connection con=null; PreparedStatement ps=null; response.setContentType("text/html"); PrintWriter out = response.getWriter();

String username=request.getParameter("uname"); String password=request.getParameter("pw"); String emailid=request.getParameter("email"); String country=request.getParameter("coun");

try

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

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/registerdb","root","tiger"); out.println("connection done successfully...");

ps=con.prepareStatement("insert into user values (?,?,?,?)"); ps.setString(1,username);

ps.setString(2,password); ps.setString(3,emailid); ps.setString(4,country);

ps.execute();

out.print("Data insserted successfully!!!!");

}

catch(Exception e) { out.println(e); } out.println("<b>"+"<b>");

}

}

2. Develop a JSP application to allow the user to modify the registration details after the valid authentication.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop simple Marks Entry Application to demonstrate accessing Database using EJB.

**CODE:**

Step 1:

## Create web application as pract7CMarksApp.

Step 2:

## Create database marksdb

Step 3:

## Create tables marks in marksdb database as:

**create table marks (id int primary key auto\_increment, sname varchar(35), marks1 int, marks2 int, marks3 int);**

step 4:

**index.jsp**

<%@page import="ejb.MarksEntryBean"%>

<%@page import="javax.naming.InitialContext"%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<!DOCTYPE html>

<%!

private static MarksEntryBean obj; public void jspInit()

{

try

{

InitialContext ic=new InitialContext(); obj=(MarksEntryBean)ic.lookup("java:global/Pract7CMarksApp/MarksEntryBean");

}

catch(Exception e)

{

System.out.println(e);

}

}

%>

<%

if(request.getParameter("InsertMarks")!=null)

{

String sname;

int marks1, marks2, marks3;

sname = request.getParameter("sname"); marks1=Integer.parseInt(request.getParameter("m1")); marks2=Integer.parseInt(request.getParameter("m2")); marks3=Integer.parseInt(request.getParameter("m3")); obj.addMarks(sname,marks1,marks2,marks3); out.print("Marks entered successfully..!!!!");

}

%>

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<title>JSP Page</title>

</head>

<body>

<h2>Enter Details</h2>

<form name="result" method="post">

Enter student's name: <input type='text' name="sname" /><br>

Enter subject 1 marks: <input type='text' name="m1" /><br> Enter subject 2 marks: <input type='text' name="m2" /><br> Enter subject 3 marks: <input type='text' name="m3" /><br>

<input type='submit' name="InsertMarks" /><br>

</form>

</body>

</html>

**Step 4:**

**create stateful java bean as select source package -> session bean -> class name -> MarksEntryBean -> package -> ejb -> bean type-> stateful -> don’t select Local / Remote -> finish.**

package ejb; import java.sql.\*;

import javax.ejb.Stateful; @Stateful

public class MarksEntryBean { String sname;

int m1,m2,m3; Connection con=null; Statement st=null; String query="";

public void addMarks(String sname,int m1,int m2,int m3)

{

try

{

Class.forName("com.mysql.jdbc.Driver"); con=DriverManager.getConnection("jdbc:mysql://localhost:3306/marksdb", "root","tiger");

st=con.createStatement();

query="insert into marks (sname,marks1,marks2,marks3) values ('"+sname+"','"+m1+"','"+m2+"','"+m3+"')";

st.executeUpdate(query); System.out.print("Marks entered sucessfully!!");

}

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

}

}

2. Write a simple JSP application to demonstrate the use of implicit object (at least 3 methods of 4 objects).

Create a JSP application to demonstrate the use of JSTL. 20

* 1. **CODE:**

## index.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>

## 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="/index.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>

1. Develop simple application to demonstrate accessing Session Bean using EJB.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Create a Currency Converter application using EJB.

## CODE:

**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" >Dollar to Rupees<br>

<input type="reset" ><input type="submit" value="CONVERT" >

</form>

</body>

</html>

## Step 2 : Create a session bean named as *CCBean* in the package named *mybeans*. Select the option Stateless and click on Local Interface.

**Here you will find two files created in the mybeans package named as *CCBean.java and CCBeanLocal.java***

## CCBeanLocal.java

package mybeans;

import javax.ejb.Stateless; @Stateless

public interface CCBeanLocal {

//default constructor

public double r2Dollar(double r); public double d2Rupees(double d); }

## CCBean.java

package mybeans;

import javax.ejb.Stateless; @Stateless

public class CCBean implements CCBean1Local

{

public double r2Dollar(double r)

{

return r/65.65;

}

public double d2Rupees(double d)

{

return d\*65.65;

}

}

## Step 3: Create a Servlet file name CCServlet in the package mypack.

package mypack; import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*; import javax.ejb.EJB;

import mybeans.CCBeanLocal;

public class CCServlet extends HttpServlet {

### @EJB CCBeanLocal 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)+" Dollars</h1>");

}

if(request.getParameter("type").equals("d2r"))

{

out.println("<h1>"+amt+ " Dollars = "+obj.d2Rupees(amt)+" Rupees</h1>");

}

}

}

1. Write a JSP code to accept an employee id from user and delete the records of that employee. If the employee id does not exist, it should redirect to page with message "No such employee ID" else it should redirect to another page with the message "Employee record deleted successfully".

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1.Develop simple EJB application to demonstrate Servlet Hit count using

Singleton Session Beans.

**CODE:**

## Java Web-> web application -> Pract7AServletHitsSingltonApp -> finish. Step 1: Index.html

<html>

<head>

<title>TODO supply a title</title>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta http-equiv="Refresh" content="0; URL=ServletClient">

</head>

<body>

<div>TODO write content</div>

</body>

</html>

## Step2: Create a Session Bean named as CountServletHitsBean Select Singleton 

**package name as ejb (do not select Local or Remote)**

package ejb;

import javax.ejb.Singleton; @Singleton

public class CountServletHitsBean { private int hitCount;

public synchronized int getCount()

{

return hitCount++;

}

}

## Step 3: Create a Servlet File name ServletClient in the package name as servlet.

**Do not select the Deployment Discriptor file.**

package servlet;

import ejb.CountServletHitsBean; import java.io.\*;

import javax.ejb.EJB;

import javax.servlet.ServletException; import javax.servlet.annotation.WebServlet; import javax.servlet.http.\*;

@WebServlet(name = "ServletClient", urlPatterns = {"/ServletClient"}) public class ServletClient extends HttpServlet {

@EJB CountServletHitsBean obj; @Override

protected void service (HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException

{

res.setContentType("text/html"); PrintWriter out=res.getWriter();

out.print("<b>Number of times this Servlet is accessed </b>: "+obj.getCount());

}

}

2. Write a servlet code to store the biodata details of a user into the database.

(Name, age, address, hobbies, gender, Qualification).

**Code:**

**MySql Command from mysql software:-**

* + 1. Select **services ->** expand **databases** -> right click on **MySQL server at localhost:3306[disconnected] ->** click on **connect ->** enter password **(tiger)** -> OK
    2. Again right click on **MySQL server at localhost:3306 ->** select **Create database ->** enter database name and select the check box to grant permission.
    3. Right click on **Table** under your daatbase
    4. Enter table name user by replacing untitled. Click on **Add column,** name -> username, type-> varchar, size-> 20, select checkbox of primary key, again click on **Add column** password varchar size 20, again click on **Add column** emailid varchar(20), again click **Add column** country varchar 10;
    5. add mysql-connector to library folder of the current application

## index.html

<html>

<body>

<form action="RegistrationServlet" method="post">

User name : <input type="text" name="uname"> <br> Password : <input type="password" name="pw"><br> Email Id : <input type="text" name="email"> <br> Country : <select name="coun">

<option>select...

<option> India

<option> Bangladesh

<option> Bhutan

<option> Canada

</select> <br>

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

</form>

</body>

</html>

## RegistrationServlet.java

import java.io.\*; import java.sql.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class RegistrationServlet extends HttpServlet

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

{ Connection con=null; PreparedStatement ps=null; response.setContentType("text/html"); PrintWriter out = response.getWriter();

String username=request.getParameter("uname"); String password=request.getParameter("pw"); String emailid=request.getParameter("email"); String country=request.getParameter("coun");

try

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

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/registerdb","root","tiger"); out.println("connection done successfully...");

ps=con.prepareStatement("insert into user values (?,?,?,?)"); ps.setString(1,username);

ps.setString(2,password); ps.setString(3,emailid); ps.setString(4,country);

ps.execute();

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1. Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC.

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

**OUTPUT:**

2. Develop servlet application for accepting user registration details and

displaying it on another page

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1. 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.

**CODE:**

## Index.html

<html>

<body>

<form action="UpdateEmp.jsp" >

Enter Employee Number<input type="text" name="txtEno" ><br> Enter Salary to update<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/empdb","root","tiger"); PreparedStatement stmt = con.prepareStatement("select \* from emp where empno=?");

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 empno=?");

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>

1. Develop simple application to demonstrate accessing Session Bean using EJB.

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1. Create a servlet that uses Cookies to store the number of times a user has visited servlet.

## CODE:

**CookieServlet.java**

## /\*

* **To change this license header, choose License Headers in Project Properties.**

## To change this template file, choose Tools | Templates

* **and open the template in the editor.**

## \*/

package pract2;

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CookieServlet extends HttpServlet

{

private int i=1;

public void doGet(HttpServletRequest request, HttpServletResponse response) throws IOException, ServletException

{ response.setContentType("text/html"); PrintWriter out = response.getWriter(); String k=String.valueOf(i);

Cookie c = new Cookie("visit",k); response.addCookie(c);

int j=Integer.parseInt(c.getValue()); if(j==1)

{

out.println("This is the first time you are visiting this page");

}

else

{ synchronized(CookieServlet.this)

{ out.println("You visited this page "+i+" times");

}

} i++;

}

}

1. Develop a JSP application to allow the user to modify the registration details after the valid authentication.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a Simple Room Reservation System Application Using EJB.

## CODE:

**Index.html**

<html>

<head>

<title>Room Reservation</title>

</head>

<body>

<form method="post" action="RoomClient">

<br> No of Rooms <input type=text name="t1">

<br> <input type="submit" name="btn" value="CheckIN">

<br> <input type="submit" name="btn" value="CheckOUT">

</form>

</body>

</html>

## Step2: Create a session bean named as *RoomBean* in the package named *ejb*. Select the option Stateless and click on Local Interface.

**Here you will find two files created in the ejb package named as *RoomBean.java and RoomBeanLocal.java***

## RoomBeanLocal.java

package ejb;

import javax.ejb.Local; @Local

public interface RoomBeanLocal { public int checkin(int no);

public int checkout(int no);

}

## RoomBean.java

package ejb;

import javax.ejb.Stateless; import java.sql.\*; @Stateless

public class RoomBean implements RoomBeanLocal {

### public int checkin(int no) {

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost/roomdb","root","tiger");

String sql1 = "select \* from room"; Statement st=con.createStatement(); ResultSet rs=st.executeQuery(sql1); rs.next();

int total=rs.getInt(1); int occ=rs.getInt(2); int free=total-occ;

System.out.println(total); System.out.println(free); if (free>=no)

{

String sql2="update room set occ=?"; PreparedStatement ps=con.prepareStatement(sql2);

ps.setInt(1, occ+no);

int res=ps.executeUpdate(); return res;

}

else return 0;

}

catch(Exception e)

{

return 0;

}

}

### public int checkout(int no) {

try

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost/roomdb","root","tiger");

String sql1 = "select \* from room"; Statement st=con.createStatement(); ResultSet rs=st.executeQuery(sql1); rs.next();

int total=rs.getInt(1); int occ=rs.getInt(2); **if (occ>=no)**

{

String sql2="update room set occ=?"; PreparedStatement ps=con.prepareStatement(sql2); **ps.setInt(1, occ-no);**

int res=ps.executeUpdate(); return res;

}

else return 0;

}

catch(Exception e)

{

return 0;

}

}

}

## Step 3: Create a Servlet file named as RoomClient. Do not click on web.xml (Deployment Descriptor)

package servlet;

import ejb.RoomBeanLocal; import java.io.\*;

import javax.ejb.EJB; import javax.servlet.\*; import javax.servlet.http.\*;

import javax.servlet.annotation.\*;

@WebServlet(name = "roomclient", urlPatterns = {"/roomclient"}) public class roomclient extends HttpServlet {

@EJB RoomBeanLocal obj;

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

response.setContentType("text/html"); PrintWriter out = response.getWriter(); try {

int no=Integer.parseInt(request.getParameter("t1"));

String b=request.getParameter("btn"); int res=0;

if(b.equals("CheckIN"))

{

res=obj.checkin(no); if (res==1)

out.println(no + " rooms check-in");

}

if(b.equals("CheckOUT"))

{

res=obj.checkout(no); if (res==1)

out.println(no + " rooms check-out");

}

if(res==0)

out.println("Not possible to do Check IN / OUT"); out.println("<br><br><a href=index.html> Back </a>");

}

finally {

out.close();

}

}

}

2. Develop Servlet Application of Basic Calculator (+,-,\*, /,%) using

ServletInputStream and ServletOutputStream.

## CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

## OUTPUT:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Create a JSP page to demonstrate the use of Expression language.

**CODE:**

## Index.jsp

<body>

<h3>welcome to index page</h3>

<%

session.setAttribute("user","Admin");

%>

<%

Cookie ck=new Cookie("name","mycookie"); response.addCookie(ck);

%>

<form action="ExpressionLanguage.jsp">

Enter Name:<input type="text" name="name" /><br/><br/>

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

</form>

</body>

## ExpressionLanguage.jsp

<body>

Welcome, ${ param.name }

Session Value is ${ sessionScope.user } Cookie name is , ${cookie.name.value}

</body>

## ELArithemeticOperator.jsp

<body>

<%-- arithmetic op --%> 5\*5+4: ${5\*5+4} <br>

1.4E4+1.4: ${1.4E4+1.4}<br>

10 mod 4: ${10 mod 4}<br>

15 div 3: ${15 div 3}<br>

</body>

## ELLogicalOperator.jsp

<body>

<%-- LogicalOperator --%>

<h2>Logical Operator</h2>

true and true: ${true and true}<br> true && false: ${true && false}<br> true or true: ${true or true}<br>

true || false: ${true || false}<br> not true: ${not true}<br>

!false: ${!false}

</body>

## ELRelationalOperator.jsp

<body>

<%-- RelationalOperator --%>

<h2>Relational Operator</h2> 10.0==10: ${10.0==10} <br>

10.0 eq 10: ${10.0 eq 10} <br>

((20\*10)!= 200): ${((20\*10)!= 200)} <br>

3 ne 3: ${3 ne 3} <br>

3.2>=2: ${3.2>=2} <br>

3.2 ge 2: ${3.2 ge 2} <br>

2<3: ${2<3} <br>

4 lt 6: ${4 lt 6} <br>

2 <= 4: ${2 <= 4} <br>

4 le 2: ${4 le 2}

</body>

## ELconditional op

<body>

<h2>Conditional Operator</h2>

The result of 10>2 is: "${(10>1)?'greater':'lesser'}"

</body>

## Empty Operator

<H1>Empty Operator Example</H1>

The Value for the Empty operator is:: ${empty "txxt"}

1. Create a Servlet application to upload and download a file.

## CODE:

**Uploading a file Index.html**

<form action="FileUploadServlet" method="post" enctype="multipart/form-data"> Select File to Upload:<input type="file" name="file" id="file">

Destination <input type="text" value="/tmp" name="destination">

<br>

<input type="submit" value="Upload file" name="upload" id="upload">

</form>

## FileUploadServlet.java

package fileservletapp; import java.io.\*; import javax.servlet.\*;

import javax.servlet.annotation.MultipartConfig; import javax.servlet.http.\*;

@MultipartConfig

public class FileUploadServlet extends HttpServlet {

public void doPost(HttpServletRequest req,HttpServletResponse res) throws ServletException, IOException

{

res.setContentType("text/html"); PrintWriter out = res.getWriter();

String path=req.getParameter("destination"); Part filePart=req.getPart("file");

String sfilePart=req.getPart("file").toString(); out.print("<br> filePart: "+sfilePart);

String filename=filePart.getSubmittedFileName().toString(); out.print("<br><br><hr> file name: "+filename); OutputStream os=null;

InputStream is=null; try {

os=new FileOutputStream(new File(path+File.separator+filename)); is=filePart.getInputStream();

int read=0;

byte[] b=new byte[1024];

while ((read = is.read(b)) != -1) { os.write(b, 0, read);

}

out.println("<br>file uploaded sucessfully...!!!");

}

catch(FileNotFoundException e){out.print(e);}

} }

## Downloading a file Index.html

<body>

<h1>File Download Application</h1>

Click <a href="DownloadServlet?filename=SampleChapter.pdf">Sample Chapter</a>

<br/><br/>

Click <a href="DownloadServlet?filename=TOC.pdf">Table Of Contents</a>

</body>

## DownloadServlet.java

package filedownloadapp; import java.io.\*;

import javax.servlet.\*; import javax.servlet.http.\*;

public class DownloadServlet extends HttpServlet

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

{ response.setContentType("APPLICATION/OCTET-STREAM"); String filename = request.getParameter("filename"); ServletContext context = getServletContext();

InputStream is = context.getResourceAsStream("/" + filename); ServletOutputStream os = response.getOutputStream();

response.setHeader("Content-Disposition","attachment; filename=\"" + filename + "\"");

// if comment this statement then it will ask you about the editor with which you want to open the file int i;

byte b[]=new byte[1024]; while ((i=is.read(b)) != -1) { os.write(b);

}

is.close();

os.close();

}

}

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1. 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.
2. **CODE:**

## Index.html

1. <html>
2. <body>
3. <form action="UpdateEmp.jsp" >
4. Enter Employee Number<input type="text" name="txtEno" ><br> Enter Salary to update<input type="text" name="txtSal" ><br>
5. <input type="reset" ><input type="submit">
6. </form>
7. </body>
8. </html>

## UpdateEmp.jsp

1. <%@page contentType="text/html" import="java.sql.\*" %>
2. <html>
3. <body>
4. <h1>Updating Employee Record</h1>
5. <%
6. String eno=request.getParameter("txtEno"); String sal = request.getParameter("txtSal"); try{ Class.forName("com.mysql.jdbc.Driver"); Connection con =
7. DriverManager.getConnection("jdbc:mysql://localhost:3306/empdb","root","tiger"); PreparedStatement stmt = con.prepareStatement("select \* from emp where empno=?");
8. stmt.setString(1, eno);
9. ResultSet rs = stmt.executeQuery(); if(rs.next()){
10. out.println("<h1> Employee "+rs.getString(2)+" Exist </h1>"); PreparedStatement pst= con.prepareStatement("update emp set salary=? where empno=?");
11. pst.setString(1, sal); pst.setString(2, eno); pst.executeUpdate();
12. out.println("<h1>Employee Record updated !!!!!</h1>");
13. }
14. else{
15. out.println("<h1>Employee Record not exist !!!!!</h1>");
16. }
17. }catch(Exception e){out.println(e);}
18. %>
19. </body>
20. </html>
21. Develop servlet application to demonstrate basic calculator.

## CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

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1. Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed

**CODE:**

## Index.html

<html>

<body>

<form method="post" action="ValidateServlet"> User Name: <input type="text" name ="un"><br>

Password: <input type="password" name ="pw"><br>

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

</form>

</body>

</html>

## ValidateServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class ValidateServlet extends HttpServlet

{ public void doPost(HttpServletRequest req, HttpServletResponse res)throws IOException, ServletException

{ res.setContentType("text/html"); PrintWriter out=res.getWriter();

String username=req.getParameter("un"); String password=req.getParameter("pw"); if(password.equals("Servlet"))

{

req.setAttribute("s1username",username); req.setAttribute("s1password",password);

RequestDispatcher rd= req.getRequestDispatcher("/WelcomeServlet"); rd.forward(req, res);

}

else

{

out.print("Incorrect password");

RequestDispatcher rd= req.getRequestDispatcher("/index.html"); rd.include(req, res);

}

}

}

## WelcomeServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class WelcomeServlet extends HttpServlet

{

public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException

{

res.setContentType("text/html");

try (PrintWriter out = res.getWriter()) {

String s2username = (String)req.getAttribute("s1username"); String s2password = (String)req.getAttribute("s2password"); out.println("Welcome "+s2username);

}

}

}

## OUTPUT:

1. Create a JSP page to demonstrate the use of Expression language

**CODE:**

## Index.jsp

<body>

<h3>welcome to index page</h3>

<%

session.setAttribute("user","Admin");

%>

<%

Cookie ck=new Cookie("name","mycookie"); response.addCookie(ck);

%>

<form action="ExpressionLanguage.jsp">

Enter Name:<input type="text" name="name" /><br/><br/>

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

</form>

</body>

## ExpressionLanguage.jsp

<body>

Welcome, ${ param.name }

Session Value is ${ sessionScope.user } Cookie name is , ${cookie.name.value}

</body>

## ELArithemeticOperator.jsp

<body>

<%-- arithmetic op --%> 5\*5+4: ${5\*5+4} <br>

1.4E4+1.4: ${1.4E4+1.4}<br>

10 mod 4: ${10 mod 4}<br>

15 div 3: ${15 div 3}<br>

</body>

## ELLogicalOperator.jsp

<body>

<%-- LogicalOperator --%>

<h2>Logical Operator</h2>

true and true: ${true and true}<br> true && false: ${true && false}<br> true or true: ${true or true}<br>

true || false: ${true || false}<br> not true: ${not true}<br>

!false: ${!false}

</body>

## ELRelationalOperator.jsp

<body>

<%-- RelationalOperator --%>

<h2>Relational Operator</h2> 10.0==10: ${10.0==10} <br>

10.0 eq 10: ${10.0 eq 10} <br>

((20\*10)!= 200): ${((20\*10)!= 200)} <br>

3 ne 3: ${3 ne 3} <br>

3.2>=2: ${3.2>=2} <br>

3.2 ge 2: ${3.2 ge 2} <br>

2<3: ${2<3} <br>

4 lt 6: ${4 lt 6} <br>

2 <= 4: ${2 <= 4} <br>

4 le 2: ${4 le 2}

</body>

## ELconditional op

<body>

<h2>Conditional Operator</h2>

The result of 10>2 is: "${(10>1)?'greater':'lesser'}"

</body>

## Empty Operator

<H1>Empty Operator Example</H1>

The Value for the Empty operator is:: ${empty "txxt"}

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1. Create a servlet demonstrating the use of session creation and destruction. Also check whether the user has visited this page first time or has visited earlier also using sessions

## CODE:

**CalculationVisitServlet.java**

package sessionapp;

* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.

\*/

package pract2;

/\*

* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.

\*/

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class HttpSessionServlet extends HttpServlet

{

private int counter;

public void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException

{

response.setContentType("text/html"); PrintWriter out = response.getWriter(); HttpSession session=request.getSession(true); if(session.isNew())

{

out.print("This is the first time you are visiting this page");

++counter;

}

else

{

synchronized(HttpSessionServlet.this)

{

if(counter==10)

{ session.invalidate(); counter=0; request.getSession(false);

}

else

out.print("You have visited this page "+(++counter)+ " times");

}

}

}

}

1. Develop a JSP application to authenticate user login with database.

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a web application to allow the user to enter inventory details [Product name, Product Price and Quantity]. When the user clicks on button "Store", call a bean to add the inventory details into the database using JDBC API. Display the appropriate message.

**Code:**

**MySql Command from mysql software:-**

* + 1. Select **services ->** expand **databases** -> right click on **MySQL server at localhost:3306[disconnected] ->** click on **connect ->** enter password **(tiger)** -> OK
    2. Again right click on **MySQL server at localhost:3306 ->** select **Create database ->** enter database name and select the check box to grant permission.
    3. Right click on **Table** under your daatbase
    4. Enter table name user by replacing untitled. Click on **Add column,** name -> username, type-> varchar, size-> 20, select checkbox of primary key, again click on **Add column** password varchar size 20, again click on **Add column** emailid varchar(20), again click **Add column** country varchar 10;
    5. add mysql-connector to library folder of the current application

## index.html

<html>

<body>

<form action="RegistrationServlet" method="post">

User name : <input type="text" name="uname"> <br> Password : <input type="password" name="pw"><br> Email Id : <input type="text" name="email"> <br> Country : <select name="coun">

<option>select...

<option> India

<option> Bangladesh

<option> Bhutan

<option> Canada

</select> <br>

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

</form>

</body>

</html>

## RegistrationServlet.java

import java.io.\*; import java.sql.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class RegistrationServlet extends HttpServlet

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

{ Connection con=null; PreparedStatement ps=null; response.setContentType("text/html"); PrintWriter out = response.getWriter();

String username=request.getParameter("uname"); String password=request.getParameter("pw"); String emailid=request.getParameter("email"); String country=request.getParameter("coun");

try

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

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/registerdb","root","tiger"); out.println("connection done successfully...");

ps=con.prepareStatement("insert into user values (?,?,?,?)"); ps.setString(1,username);

ps.setString(2,password); ps.setString(3,emailid); ps.setString(4,country);

ps.execute();

2. Develop a simple JSP application to pass values from one page to another with validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button).

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

**OUTPUT:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Create a simple calculator application using servlet.

## CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

2. Write a JSP to accept eno, ename and salary. Insert these records in emp. (Create the emp table with these three fields)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a web application using JSP to allow the user to register via an HTML page. When the user clicks on button "Register" call a JSP page to add the entered details to the database using JDBC API. [Registration(fname:varchar, Iname:varchar, email:varchar, userid: varchar, password:varchar)]
2. Create a servlet for a login page. If the username and password are correct then it says message "Hello <username>" else a message "login failed"

**CODE:**

## index.html

<html>

<body>

<form action="LoginServlet" method="post"> UserName : <input type="text" name="uname"><br> Password : <input type="password" name="pw"> <br>

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

</form>

</body>

</html>

## LoginServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class LoginServlet extends HttpServlet {

public void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException

{

response.setContentType("text/html"); PrintWriter out = response.getWriter();

String username=request.getParameter("uname"); String password=request.getParameter("pw");

String msg="";

if (username .equals("admin") && password.equals("admin123")) msg="Hello "+username;

else

msg="Login failed"; out.println("<b>"+msg+"<b>");

}

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC.

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

**OUTPUT:**

1. Develop servlet application for accepting user registration details and displaying it on another page (At least 6 Values).

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a web application using JSP to allow the user to login by entering the user id and the password, when the user clicks on "Login" button, call a JSP page to authenticate the login, if successful take the user to "welcome.html", otherwise display "Login Failed", and allow the user to re-login. [Login(userid: varchar, password:varchar)]
2. **CODE:**

## index.html

1. <html>
2. <body>
3. <form action="LoginServlet" method="post"> UserName : <input type="text" name="uname"><br> Password : <input type="password" name="pw"> <br>
4. <input type="submit" value="LOGIN">
5. </form>
6. </body>
7. </html>

## LoginServlet.java

1. import java.io.\*; import javax.servlet.\*;
2. import javax.servlet.http.\*;
3. public class LoginServlet extends HttpServlet {
4. public void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException
5. {
6. response.setContentType("text/html"); PrintWriter out = response.getWriter();
7. String username=request.getParameter("uname"); String password=request.getParameter("pw");
8. String msg="";
9. if (username .equals("admin") && password.equals("admin123")) msg="Hello "+username;
10. else
11. msg="Login failed"; out.println("<b>"+msg+"<b>");
12. }
13. }

2.Create a Currency Converter application using EJB.

## CODE:

**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" >Dollar to Rupees<br>

<input type="reset" ><input type="submit" value="CONVERT" >

</form>

</body>

</html>

## Step 2 : Create a session bean named as *CCBean* in the package named *mybeans*. Select the option Stateless and click on Local Interface.

**Here you will find two files created in the mybeans package named as *CCBean.java and CCBeanLocal.java***

## CCBeanLocal.java

package mybeans;

import javax.ejb.Stateless; @Stateless

public interface CCBeanLocal {

//default constructor

public double r2Dollar(double r); public double d2Rupees(double d); }

## CCBean.java

package mybeans;

import javax.ejb.Stateless; @Stateless

public class CCBean implements CCBean1Local

{

public double r2Dollar(double r)

{

return r/65.65;

}

public double d2Rupees(double d)

{

return d\*65.65;

}

}

## Step 3: Create a Servlet file name CCServlet in the package mypack.

package mypack; import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*; import javax.ejb.EJB;

import mybeans.CCBeanLocal;

public class CCServlet extends HttpServlet {

### @EJB CCBeanLocal 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)+" Dollars</h1>");

}

if(request.getParameter("type").equals("d2r"))

{

out.println("<h1>"+amt+ " Dollars = "+obj.d2Rupees(amt)+" Rupees</h1>");

}

}

}

**OUTPUT:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a web application to allow the user to enter two numbers and select an operation [+,-,\*,/] in an HTML file. When the user clicks "Calculate" button, call a servlet to compute the answer and display it to the user.

## CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

1. Create a JSP application to demonstrate the use of JSTL.
   1. **CODE:**

## index.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>

## 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="/index.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>

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1. Develop simple Marks Entry Application to demonstrate accessing Database using EJB.

**CODE:**

Step 1:

## Create web application as pract7CMarksApp.

Step 2:

## Create database marksdb

Step 3:

## Create tables marks in marksdb database as:

**create table marks (id int primary key auto\_increment, sname varchar(35), marks1 int, marks2 int, marks3 int);**

step 4:

**index.jsp**

<%@page import="ejb.MarksEntryBean"%>

<%@page import="javax.naming.InitialContext"%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<!DOCTYPE html>

<%!

private static MarksEntryBean obj; public void jspInit()

{

try

{

InitialContext ic=new InitialContext(); obj=(MarksEntryBean)ic.lookup("java:global/Pract7CMarksApp/MarksEntryBean");

}

catch(Exception e)

{

System.out.println(e);

}

}

%>

<%

if(request.getParameter("InsertMarks")!=null)

{

String sname;

int marks1, marks2, marks3;

sname = request.getParameter("sname"); marks1=Integer.parseInt(request.getParameter("m1")); marks2=Integer.parseInt(request.getParameter("m2")); marks3=Integer.parseInt(request.getParameter("m3")); obj.addMarks(sname,marks1,marks2,marks3); out.print("Marks entered successfully..!!!!");

}

%>

<html>

<head>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<title>JSP Page</title>

</head>

<body>

<h2>Enter Details</h2>

<form name="result" method="post">

Enter student's name: <input type='text' name="sname" /><br>

Enter subject 1 marks: <input type='text' name="m1" /><br> Enter subject 2 marks: <input type='text' name="m2" /><br> Enter subject 3 marks: <input type='text' name="m3" /><br>

<input type='submit' name="InsertMarks" /><br>

</form>

</body>

</html>

**Step 4:**

**create stateful java bean as select source package -> session bean -> class name -> MarksEntryBean -> package -> ejb -> bean type-> stateful -> don’t select Local / Remote -> finish.**

package ejb; import java.sql.\*;

import javax.ejb.Stateful; @Stateful

public class MarksEntryBean { String sname;

int m1,m2,m3; Connection con=null; Statement st=null; String query="";

public void addMarks(String sname,int m1,int m2,int m3)

{

try

{

Class.forName("com.mysql.jdbc.Driver"); con=DriverManager.getConnection("jdbc:mysql://localhost:3306/marksdb", "root","tiger");

st=con.createStatement();

query="insert into marks (sname,marks1,marks2,marks3) values ('"+sname+"','"+m1+"','"+m2+"','"+m3+"')";

st.executeUpdate(query); System.out.print("Marks entered sucessfully!!");

}

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

}

}

2. Develop servlet application of basic calculator

## CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop a web application using Java Servlets, to provide a set of question [5 Questions minimum] to the user. Each question should have four options, from which the user should be able to selection only one. When the user clicks on button "Done", call a servlet to compute and display the score of the user [number of correct and incorrect answers.]

2.Create a JSP page to demonstrate the use of Expression language.

**CODE:**

## Index.jsp

<body>

<h3>welcome to index page</h3>

<%

session.setAttribute("user","Admin");

%>

<%

Cookie ck=new Cookie("name","mycookie"); response.addCookie(ck);

%>

<form action="ExpressionLanguage.jsp">

Enter Name:<input type="text" name="name" /><br/><br/>

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

</form>

</body>

## ExpressionLanguage.jsp

<body>

Welcome, ${ param.name }

Session Value is ${ sessionScope.user } Cookie name is , ${cookie.name.value}

</body>

## ELArithemeticOperator.jsp

<body>

<%-- arithmetic op --%> 5\*5+4: ${5\*5+4} <br>

1.4E4+1.4: ${1.4E4+1.4}<br>

10 mod 4: ${10 mod 4}<br>

15 div 3: ${15 div 3}<br>

</body>

## ELLogicalOperator.jsp

<body>

<%-- LogicalOperator --%>

<h2>Logical Operator</h2>

true and true: ${true and true}<br> true && false: ${true && false}<br> true or true: ${true or true}<br>

true || false: ${true || false}<br> not true: ${not true}<br>

!false: ${!false}

</body>

## ELRelationalOperator.jsp

<body>

<%-- RelationalOperator --%>

<h2>Relational Operator</h2> 10.0==10: ${10.0==10} <br>

10.0 eq 10: ${10.0 eq 10} <br>

((20\*10)!= 200): ${((20\*10)!= 200)} <br>

3 ne 3: ${3 ne 3} <br>

3.2>=2: ${3.2>=2} <br>

3.2 ge 2: ${3.2 ge 2} <br>

2<3: ${2<3} <br>

4 lt 6: ${4 lt 6} <br>

2 <= 4: ${2 <= 4} <br>

4 le 2: ${4 le 2}

</body>

## ELconditional op

<body>

<h2>Conditional Operator</h2>

The result of 10>2 is: "${(10>1)?'greater':'lesser'}"

</body>

## Empty Operator

<H1>Empty Operator Example</H1>

The Value for the Empty operator is:: ${empty "txxt"}

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1. Develop a Simple Room Reservation System Application Using EJB.

## CODE:

**Index.html**

<html>

<head>

<title>Room Reservation</title>

</head>

<body>

<form method="post" action="RoomClient">

<br> No of Rooms <input type=text name="t1">

<br> <input type="submit" name="btn" value="CheckIN">

<br> <input type="submit" name="btn" value="CheckOUT">

</form>

</body>

</html>

## Step2: Create a session bean named as *RoomBean* in the package named *ejb*. Select the option Stateless and click on Local Interface.

**Here you will find two files created in the ejb package named as *RoomBean.java and RoomBeanLocal.java***

## RoomBeanLocal.java

package ejb;

import javax.ejb.Local; @Local

public interface RoomBeanLocal { public int checkin(int no);

public int checkout(int no);

}

## RoomBean.java

package ejb;

import javax.ejb.Stateless; import java.sql.\*; @Stateless

public class RoomBean implements RoomBeanLocal {

### public int checkin(int no) {

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost/roomdb","root","tiger");

String sql1 = "select \* from room"; Statement st=con.createStatement(); ResultSet rs=st.executeQuery(sql1); rs.next();

int total=rs.getInt(1); int occ=rs.getInt(2); int free=total-occ;

System.out.println(total); System.out.println(free); if (free>=no)

{

String sql2="update room set occ=?"; PreparedStatement ps=con.prepareStatement(sql2);

ps.setInt(1, occ+no);

## RoomBean.java

package ejb;

import javax.ejb.Stateless; import java.sql.\*; @Stateless

public class RoomBean implements RoomBeanLocal {

### public int checkin(int no) {

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost/roomdb","root","tiger");

String sql1 = "select \* from room"; Statement st=con.createStatement(); ResultSet rs=st.executeQuery(sql1); rs.next();

int total=rs.getInt(1); int occ=rs.getInt(2); int free=total-occ;

System.out.println(total); System.out.println(free); if (free>=no)

{

String sql2="update room set occ=?"; PreparedStatement ps=con.prepareStatement(sql2);

ps.setInt(1, occ+no);

int res=ps.executeUpdate(); return res;

}

else return 0;

}

catch(Exception e)

{

return 0;

}

}

}

## Step 3: Create a Servlet file named as RoomClient. Do not click on web.xml (Deployment Descriptor)

package servlet;

import ejb.RoomBeanLocal; import java.io.\*;

import javax.ejb.EJB; import javax.servlet.\*; import javax.servlet.http.\*;

import javax.servlet.annotation.\*;

@WebServlet(name = "roomclient", urlPatterns = {"/roomclient"}) public class roomclient extends HttpServlet {

@EJB RoomBeanLocal obj;

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

response.setContentType("text/html"); PrintWriter out = response.getWriter(); try {

int no=Integer.parseInt(request.getParameter("t1"));

String b=request.getParameter("btn"); int res=0;

if(b.equals("CheckIN"))

{

res=obj.checkin(no); if (res==1)

out.println(no + " rooms check-in");

}

if(b.equals("CheckOUT"))

{

res=obj.checkout(no); if (res==1)

out.println(no + " rooms check-out");

}

if(res==0)

out.println("Not possible to do Check IN / OUT"); out.println("<br><br><a href=index.html> Back </a>");

}

finally {

out.close();

}

}

}

. Develop servlet application for accepting user registration details and

displaying it on another page (At least 6 Values)

1. Develop a simple JSP application to pass values from one page to another with validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button).

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

**OUTPUT:**

2. Develop servlet application of basic calculator.

## Q.1 a) Create a simple calculator application using servlet. CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Develop simple EJB application to demonstrate Servlet Hit count using Singleton Session Beans.

**CODE:**

## Java Web-> web application -> Pract7AServletHitsSingltonApp -> finish. Step 1: Index.html

<html>

<head>

<title>TODO supply a title</title>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta http-equiv="Refresh" content="0; URL=ServletClient">

</head>

<body>

<div>TODO write content</div>

</body>

</html>

## Step2: Create a Session Bean named as CountServletHitsBean Select Singleton 

**package name as ejb (do not select Local or Remote)**

package ejb;

import javax.ejb.Singleton; @Singleton

public class CountServletHitsBean { private int hitCount;

public synchronized int getCount()

{

return hitCount++;

}

}

## Step 3: Create a Servlet File name ServletClient in the package name as servlet.

**Do not select the Deployment Discriptor file.**

package servlet;

import ejb.CountServletHitsBean; import java.io.\*;

import javax.ejb.EJB;

import javax.servlet.ServletException; import javax.servlet.annotation.WebServlet; import javax.servlet.http.\*;

@WebServlet(name = "ServletClient", urlPatterns = {"/ServletClient"}) public class ServletClient extends HttpServlet {

@EJB CountServletHitsBean obj; @Override

protected void service (HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException

{

res.setContentType("text/html"); PrintWriter out=res.getWriter();

out.print("<b>Number of times this Servlet is accessed </b>: "+obj.getCount());

}

}

## OUTPUT:

1. Develop servlet application of basic calculator.

## Q.1 a) Create a simple calculator application using servlet. CODE:

**index.html**

<html>

<body>

<form method=post action="CalcServlet"> NO-1 <input type=text name="t1">

NO-2 <input type=text name="t2"> <br> <br>

<input type=submit value="+" name="btn">

<input type=submit value="-" name="btn">

<input type=submit value="\*" name="btn">

<input type=submit value="/" name="btn">

</form>

</body>

</html>

## CalcServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class CalcServlet extends HttpServlet

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

{ response.setContentType("text/html"); PrintWriter out = response.getWriter();

int a=Integer.parseInt(request.getParameter("t1"));

int b=Integer.parseInt(request.getParameter("t2")); int c=0;

String op=request.getParameter("btn"); if (op.equals("+"))

c=a+b;

else if (op.equals("-")) c=a-b;

else if (op.equals("\*")) c=a\*b;

else if (op.equals("/")) c=a/b;

out.println("<b>"+a+op+b+" = "+c+"<b>");

}

}

## OUTPUT:

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1. Write a JSP that takes login details from the user and forward the request to 'login.jsp' for 'Successful login' message if username and password is equal to admin otherwise display an error message 'Access Denied'.

**CODE:**

## Index.html

<html>

<body>

<form method="post" action="ValidateServlet"> User Name: <input type="text" name ="un"><br>

Password: <input type="password" name ="pw"><br>

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

</form>

</body>

</html>

## ValidateServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class ValidateServlet extends HttpServlet

{ public void doPost(HttpServletRequest req, HttpServletResponse res)throws IOException, ServletException

{ res.setContentType("text/html"); PrintWriter out=res.getWriter();

String username=req.getParameter("un"); String password=req.getParameter("pw"); if(password.equals("Servlet"))

{

req.setAttribute("s1username",username); req.setAttribute("s1password",password);

RequestDispatcher rd= req.getRequestDispatcher("/WelcomeServlet"); rd.forward(req, res);

}

else

{

out.print("Incorrect password");

RequestDispatcher rd= req.getRequestDispatcher("/index.html"); rd.include(req, res);

}

}

}

## WelcomeServlet.java

import java.io.\*; import javax.servlet.\*;

import javax.servlet.http.\*;

public class WelcomeServlet extends HttpServlet

{

public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException

{

res.setContentType("text/html");

try (PrintWriter out = res.getWriter()) {

String s2username = (String)req.getAttribute("s1username"); String s2password = (String)req.getAttribute("s2password"); out.println("Welcome "+s2username);

}

}

}

## OUTPUT:

1. Write EJB that calculates simple interest and compound interest for principal, number of years and rate of interest.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC.

## CODE:

**Index.html**

<html>

<head>

<title>New User Registration Page</title>

</head>

<body>

<form action="Registration.jsp">

<h1>New User Registration Page</h1>

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass1"><br>

Re-Enter Password<input type="password" name="txtPass2"><br> Enter Email<input type="text" name="txtEmail"><br>

Enter Country Name<select name="txtCon">

<option>India</option>

<option>France</option>

<option>England</option>

<option>Argentina</option>

</select><br>

<input type="submit" value="REGISTER"><input type="reset">

</form>

</body>

</html>

## Registration.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass1=request.getParameter("txtPass1"); String pass2=request.getParameter("txtPass2"); String email=request.getParameter("txtEmail"); String ctry=request.getParameter("txtCon"); if(pass1.equals(pass2))

{

try

{

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb",”root”,”tiger”); PreparedStatement stmt=con.prepareStatement("insert into userpass values(?,?,?,?)"); stmt.setString(1,uname);

stmt.setString(2,pass1); stmt.setString(3,email); stmt.setString(4,ctry);

int row=stmt.executeUpdate(); if(row==1)

{

out.println("Registration Successful");} else

{

out.println("Registration FAILED!!!!");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){out.println(e);}

}

else

{

out.println("<h1>Password Mismatch</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<% }

%>

</body>

</html>

## Login.html

<html>

<body>

<h1>Login Page</h1>

<form action="Login.jsp">

Enter User Name<input type="text" name="txtName"><br> Enter Password<input type="password" name="txtPass"><br>

<input type="submit" value="~~~LOGIN~~"><input type="reset">

</form>

</body>

</html>

## Login.jsp

<%@page contentType="text/html" import="java.sql.\*"%>

<html><body>

<h1>Registration JSP Page</h1>

<%

String uname=request.getParameter("txtName"); String pass=request.getParameter("txtPass"); ResultSet rs=null;

try{ Class.forName("com.mysql.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb"",”root”,”tiger”); Statement stmt=con.createStatement();

rs=stmt.executeQuery("select password from userpass where username='"+uname+"'"); rs.next();

if(pass.equals(rs.getString(1)))

{

out.println("<h1>~~~LOGIN SUCCESSFULLL~~~</h1>");

}

else

{

out.println("<h1>password does not match!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

}catch(Exception e){

out.println("<h1>User does not exist!!!!!</h1>");

%>

<jsp:include page="index.html"></jsp:include>

<%

}

%>

</body>

</html>

**OUTPUT:**