Practical No. 1A

Aim: Create a simple calculator application using servlet.

Code:

Index.html

```
<!DOCTYPE html>
<html>
   <head>
      <title>TODO supply a title</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <form  action="Calculate" >
Enter First Number <input type="text" name="t1" ><br>
Enter Second Number <input type="text" name="t2" ><br>
Select an Operation
<input type="radio" name="r1" value="Add">+
<input type="radio" name="r1" value="Sub">-
<input type="radio" name="r1" value="Mul">*
<input type="radio" name="r1" value="Div">/ <br>
<input type="reset">
<input type="submit" value="Calculate" >
      </form>
   </body>
```

```
</html>
```

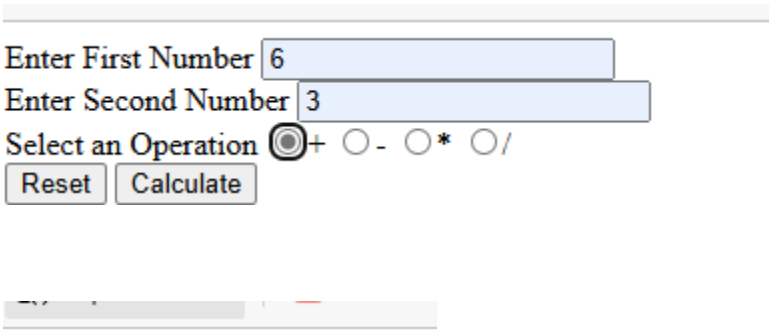
Calculate.java

```
import java.io.IOException;
 import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
@WebServlet(urlPatterns = {"/c"})
public class c extends HttpServlet {


   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
          throws ServletException, IOException {
       response.setContentType("text/html;charset=UTF-8");
       try (PrintWriter out = response.getWriter()) {
         String t1 = request.getParameter("t1");
          String t2 = request.getParameter("t2");
          String oper = request.getParameter("r1");
          int x = Integer.parseInt(t1);
          int y = Integer.parseInt(t2);
          int ans = 0;
```

```
        if(oper.equals("Add"))
           ans=x+y;
        else if(oper.equals("Sub"))
           ans=x-y;
        else if(oper.equals("Mul"))
           ans=x*y;
        else
           ans=x/y;

         out.println("<h1>Result is: " + ans + "</h1>");
      }
      }
```

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to edit the code.">

OUTPUT:



Result is: 9

Practical No. 1B

Aim: 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

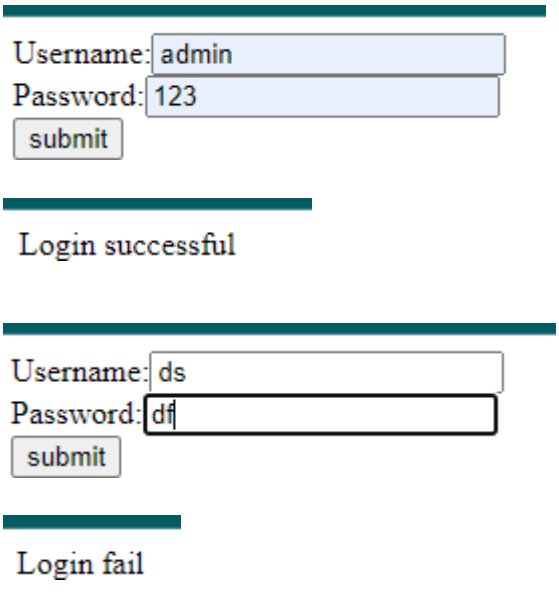
```
<html>
   <head>
      <title>TODO supply a title</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <form method="post" action="login">
         Username:<input type="text" name="t1" ><br>
         Password:<input type="text" name="t2"><br>
         <input type="Submit" value="submit">
      </form>
   </body>
</html>
```

LoginServlet.java

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

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

@WebServlet(urlPatterns = {"/login"})
public class login extends HttpServlet {

  protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter()) {
       String uname = request.getParameter("t1");
        String n = request.getParameter("t2");
        if (uname.equals("admin") && n.equals("123")) {
           out.println("Login Successful” );
        } else {
           out.println("Login fail");
        }
      }
  }
       // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click
on the + sign on the left to edit the code.">
```

Output:


Username: admin
Password: 123
submit
Login successful
Username: ds
Password: df
submit
Login fail

Practical No. 1C

Aim: 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

Code:

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Registration page</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form  action="RegisterServlet">
      <h1>Welcome to Registration page</h1>
      Enter Username:<input type="text" name="txtUid"><br>
      Enter Password:<input type="text" name="txtPass"><br>
      Enter Email:<input type="text" name="txtEmail"><br>
      Enter Country:<input type="text" name="txtCon"><br>
      <input type="reset">
      <input type="submit" value="REGISTER">
    </form>
  </body>
```

```
</html>
```

RegisterServlet.java

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

@WebServlet(urlPatterns = {"/RegisterServlet"})
public class RegisterServlet extends HttpServlet {
   public void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      PrintWriter out = response.getWriter();
        String id = request.getParameter("txtUid");
         String ps = request.getParameter("txtPass");
         String em = request.getParameter("txtEmail");
```

```
        String co = request.getParameter("txtCon");
        try
        {
           Class.forName("com.mysql.jdbc.Driver");
           Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/login","mani","ma
ni");
           PreparedStatement pst = con.prepareStatement("insert into mani
values(?,?,?,?)");
           pst.setString(1,id);
           pst.setString(2,ps);
           pst.setString(3,em);
           pst.setString(4,co);
           int row = pst.executeUpdate();
           out.println("<h1>"+row+"Inserted successfullyyyyyyy");
        }
        catch(Exception e)
        {
           out.println(e);
        }

     }
  }
}
```

OUTPUT:

Welcome to Registration page

Enter Username: xyz
Enter Password: 123
Enter Email: mm@gmail.com
Enter Country: india
Reset REGISTER

1Inserted successfullyyyyyyy

#	USERNAME	PASSWORD	EMAIL	COUNTRY
1	xyz	123	mm@gmail.com	india

Practical No. 2A

Aim: 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

```
<!DOCTYPE html>
<html>
  <head>
    <title>Request Dispatcher</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="LoginServlet">
    Enter Username:<input type="text" name="txtId"><br>
    Enter Password:<input type="text" name="txtPass"><br>
    <input type="Submit" value="Click to Login">

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

LoginServlet.java

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

@WebServlet(urlPatterns = {"/LoginServlet"})
public class LoginServlet extends HttpServlet {

   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
          throws ServletException, IOException {
       response.setContentType("text/html;charset=UTF-8");
       try (PrintWriter out = response.getWriter()) {
         out.println("<title>Servlet LoginServlet</title><head>");
          String uname=request.getParameter("txtId");
          String upas = request.getParameter("txtPass");
          if(uname.equals("admin")&& upas.equals("servlet"))
          {
```

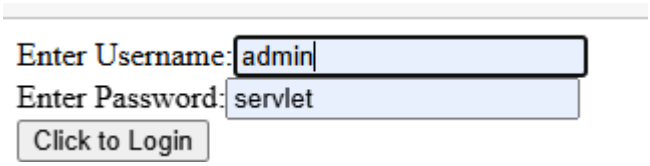
```
            RequestDispatcher rd =
request.getRequestDispatcher("WelcomeServlet");
            rd.forward(request,response);
        }
          else
        {

            RequestDispatcher rd = request.getRequestDispatcher("index.html");

            rd.include(request,response);
        }

        out.println("Invalid Login");
      }
   }

   // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on
the + sign on the left to edit the code.">
```

Welcome.java

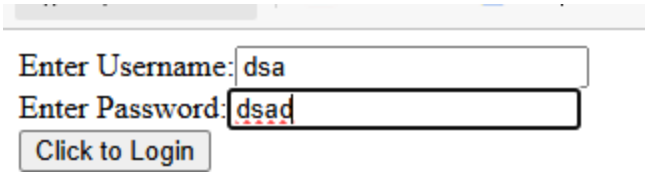
```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
```

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

@WebServlet(urlPatterns = {"/WelcomeServlet"})
public class WelcomeServlet extends HttpServlet {

   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
         throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter()) {
        out.println("Welcome"+request.getParameter("txtId"));
      }
   }

   // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on
the + sign on the left to edit the code.">
```

Output:



Welcomeadmin



Invalid Login

Practical No. 2B

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

Code:

Index.html

```
<html>
<head><title>Cookie Demo</title></head>
<body>
<form action="coo" >
Enter Your Name <input type="text" name="txtName"><br>
<input type="submit" value="~~~ Click to Enter ~~~">
</form>
</body>
</html>
```

Cookie.java

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

```
import javax.servlet.http.Cookie;


@WebServlet(urlPatterns = {"/coo"})
public class coo extends HttpServlet {
   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      PrintWriter out = response.getWriter();
      if(request.getCookies()==null)
      {
         Cookie c1 = new Cookie("vc","1");
         response.addCookie(c1);
         out.println("Count 1");
      }
      else
      {
         Cookie []rc = request.getCookies();
         int x = Integer.parseInt(rc[0].getValue());
         x++;
         rc[0].setValue(""+x);
         response.addCookie(rc[0]);
         out.println("count"+x);
      }
```

```
    }

    // <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on
the + sign on the left to edit the code.">
```

Output:

Enter Your Name abc
~~~ Click to Enter ~~~

Count 1
~~~

Practical No.2C

Aim: 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:

Index.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>TODO supply a title</title>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
  </head>
  <body>
    <form action="SessionServlet">

      Enter Username:<input type="text" value="name"><br>
      <input type="submit" value="Log in">
    </form>
  </body>
</html>
```

SessionServlet.java

Code:

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

@WebServlet(urlPatterns = {"/SessionServlet"})
public class SessionServlet extends HttpServlet {

   int count = 0, c;


 protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter()) {
        /* TODO output your page here. You may use following sample code. */
        HttpSession s = request.getSession();
        s.setAttribute("Hitcount", count);
```

```
        out.println(" <br><br>Session Creation Time" + new
Date(s.getCreationTime()));
        if (s.isNew()) {
           out.println("<br><br>Session is new Session" + s.getId());

        } else {
           out.println("<br><br>Session is same " + s.getId());
        }
        s.setAttribute("HitCount", count);
        c = (Integer)s.getAttribute("HitCount");
        if (c == 0) {
           count++;
           s.setAttribute("HitCount", count);
        } else {
           count++;
           s.setAttribute("HitCount", count);
        }
        c = (Integer)s.getAttribute("HitCount");
        out.println("<br><br>Hitcount" + c);
        out.println("<h2><a href=LogoutServlet>Click Here to logout</a>");
     }
  }
```

LogoutServlet.java

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



@WebServlet(urlPatterns = {"/LogoutServlet"})
public class LogoutServlet extends HttpServlet {


   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
         throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter()) {
         /* TODO output your page here. You may use following sample code. */
         HttpSession s = request.getSession();
         if (s != null) {
            s.invalidate();
            out.println("Session Expired");
         }
```

```
    }
}
```

Output:

Enter Username: xyz
Log in

Session Creation Time2024-07-09

Session is new Session3a44012985d18ef2ff2d370b273b

Hitcount5

Click Here to logout

Session Expired

Practical No.3B

Aim: Develop a simple servlet Question and answer application Using database.

Code:

Index.html

```
<html>
<head><title>Quiz Application</title></head>
<body>
<h1>Welcome to Quiz Servlet </h1>
<h1><a href=”QuizServlet” >CLICK TO START QUIZ</a></h1>
</body>
</html>
```

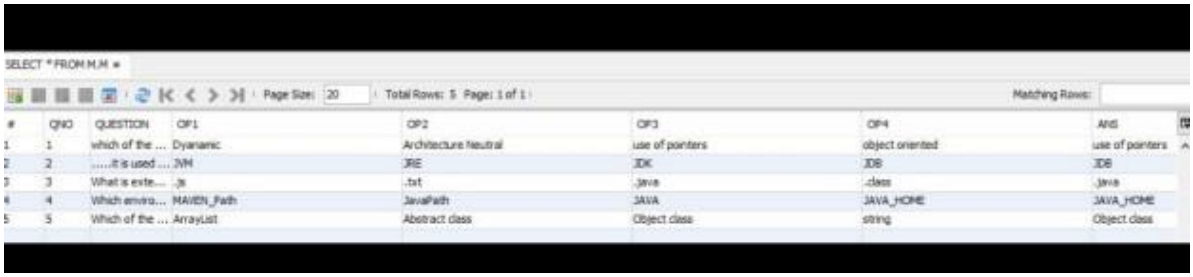
Quiz Servlet.java

```
import java.io.*;
import java.sql.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class QuizServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response)
 throws ServletException, IOException {
 response.setContentType("text/html;charset=UTF-8");
 PrintWriter out = response.getWriter();
out.println("<form action=ShowResult >");
```

```
try {
Class.forName("com.mysql.jdbc.Driver");
Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:1527/mani","root","root
");
Statement stmt = con.createStatement();
ResultSet res = stmt.executeQuery("select * from quiz");
out.println("<table border=1 >");
int qno=0;
while(res.next()){
qno++;
out.println("<tr><td>"+res.getString(1)+"</td>");
out.println("<td>"+res.getString(2)+"</td></tr>");
out.println("<tr><td><input type=radio
name="+qno+"value="+res.getString(3)+"></td><td>"+res.getString(3)+"</td><
/tr>");
out.println("<tr><td><input type=radio
name="+qno+"value="+res.getString(4)+"></td><td>"+res.getString(4)+"</td><
/tr>");
out.println("<tr><td><input type=radio
name="+qno+"value="+res.getString(5)+"></td><td>"+res.getString(5)+"</td><
/tr>");
out.println("<tr><td><input type=radio
name="+qno+"value="+res.getString(6)+"></td><td>"+res.getString(6)+"</td><
/tr>");
}
}catch(Exception e){out.println(e);}
```

```
out.println("</table>");
out.println("<input type=reset >");
 out.println("<input type=submit value=SUBMIT >");
 out.println("</form>");
}
}
```

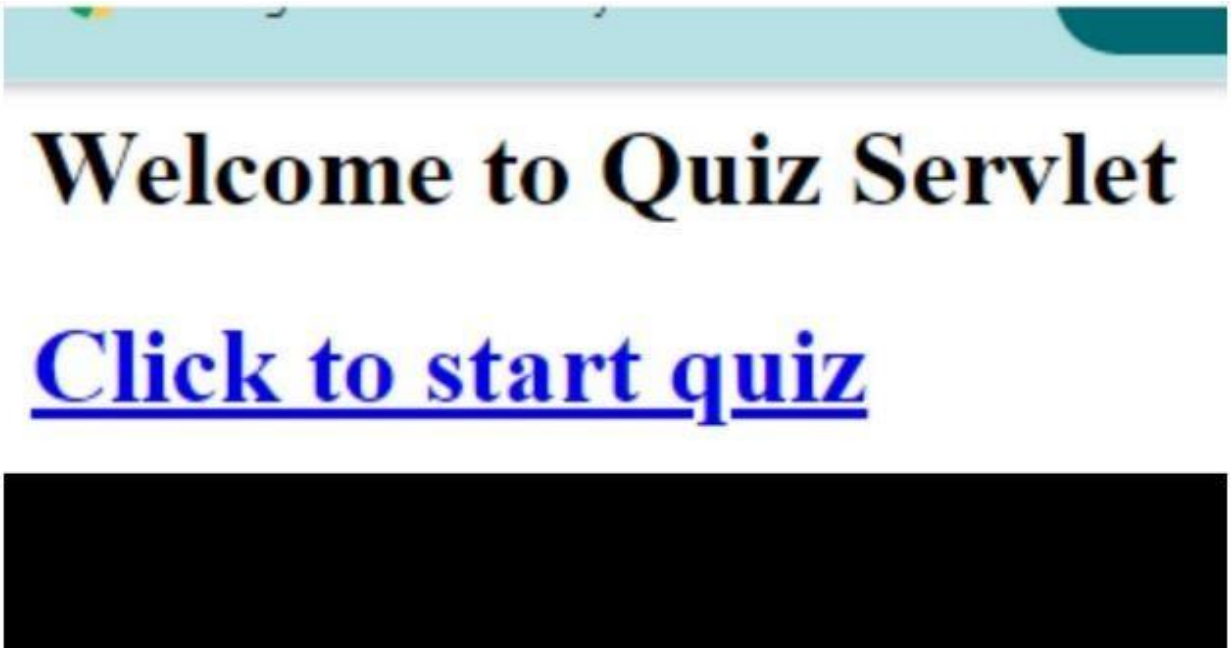
Output:



SELECT * FROM M_M

Page Size: 20 Total Rows: 5 Page: 1 of 1 Matching Rows:

#	QNO	QUESTION	OP1	OP2	OP3	OP4	Ans
1	1	which of the ...	Dyanamic	Architecture Neutral	use of pointers	object oriented	use of pointers
2	2	.....it is used ...	JVM	JRE	JDK	JDB	JDB
3	3	What is exte...	.js	.txt	.java	.class	.java
4	4	Which enviro...	MAVEN_Path	JavaPath	JAVA	JAVA_HOME	JAVA_HOME
5	5	Which of the ...	ArrayList	Abstract class	Object class	string	Object class



Welcome to Quiz Servlet

Click to start quiz

1	which of the following is not a java features?
○	Dyanamic
○	Architecture Neutral
○	use of pointers
○	object oriented
2	.....it is used to find and fix bugs in the java programs
○	JVM
○	JRE
○	JDK
○	JDB
3	What is extension of java code files?
○	.js
○	.txt
○	.java
○	.class
4	Which environment variable is used to set the java path?
○	MAVEN_Path
○	JavaPath
○	JAVA
○	JAVA_HOME
5	Which of the following is a superclass of every class in java?
○	ArrayList
○	Abstract class
○	Object class
○	string

Reset SUBMIT

Incorrect

Incorrect

Incorrect

Correct

Correct

Your Score is 2

Practical No.4A

Aim: Develop a simple JSP application to display values obtained from the use of intrinsic objects of various types.

Index.html

Code:

```
<%--
 Document : implict
 Created on : 15 Jul, 2024, 7:55:49 AM
 Author : admin
--%>
<%@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>
 <%@page import="javax.servlet.http.*"%>
 </head>
 <body>
 <h1>Implicit object</h1>
 <h2>Request object</2>
 Remote Host Name:<%=request.getRemoteHost()%><br>
 Server.Port Number:<%=request.getServerPort()%><br>
 Protocol Name:<%=request.getProtocol()%><br>
```

```
Content type of page:<%=request.getContentType()%><br>
Local Name:<%=request.getLocalName()%><br>
Server Name:<%=request.getServerName()%>
<h2>2.Output Object</h2>
<%
out.println("this is out.println() method");
%>
<h2>3.Session Object</h2>
newly created session by server:
<%=session.isNew()%>
<%
session.setMaxInactiveInterval(500);
%>
Inactive Interval time period;
<%=session.getMaxInactiveInterval()%>
<h2> Config object</h2>
initialization parameter:
<%=config.getServletContext()%>
<h2>page object</h2>
page Context;
<%=pageContext.getSession()%>
</body>
</html>
```

Output:

Implicit object

Request object Remote Host Name:0:0:0:0:0:0:0:1
Server.Port Number:8080
Protocol Name:HTTP/1.1
Content type of page:null
Local Name:0:0:0:0:0:0:0:1
Server Name:localhost

2.Output Object

this is out.println() method

3.Session Object

newly created session by server: true Inactive Interval time period; 500

Config object

initialization parameter: org.apache.catalina.core.ApplicationContextFacade@568b4aa

page object

page Context; org.apache.catalina.session.StandardSessionFacade@2b296446

Practical No.4B

Aim: 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).

Index.html

```
<!DOCTYPE html>
<!--
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.
-->
<html>
 <head>
 <title>TODO supply a title</title>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 </head>
 <body>
 <form action="newjsp1.jsp">
 Name: <input type="text" name="name"><br>
 Age:<input type="text" name="age"><br>
 Select Gender:
 <input type="radio" name="r1" value="Male">Male<br>
 <input type="radio" name="r1" value="Female">Female<br>
```

```
<input type="radio" name="r1" value="Other">Other<br>
Select Hobbies:
<input type="checkbox" name="c1" value="Singing">Singing<br>
<input type="checkbox" name="c1" value="Dancing">Dancing<br>
<input type="checkbox" name="c1" value="Acting">Acting<br>
<input type="submit" value="submit"><br>



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

login.jsp

```
<%--
 Document : newjsp1
 Created on : 15 Jul, 2024, 8:53:54 AM
 Author : admin
--%>
<%@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 name = request.getParameter("name");
String agestr = request.getParameter("age");
String errmsg = "";
if (name.trim().equals("")) {
errmsg = "Plz. Provide Name";
}
if (agestr.trim().equals("")) {
errmsg += "Plz ProvideAge<br>";
} else {
try {
int age = Integer.parseInt(agestr);
} catch (Exception e) {
errmsg += "Invalid Age<br>";
}
}
if (errmsg.trim().equals("") == false) {
%>
<jsp:include page="index.html"></jsp:include>
<%
out.println(errmsg);
```

```
 } else {
 out.println("Name:" + name);
 out.println("<br>Age:" + agestr);
 }
%>
 </body>
</html>
```

Output:


Name:
Age:
Select Gender: Male
Female
Other
Select Hobbies: Singing
Dancing
Acting
submit
Plz. Provide Name
Plz ProvideAge

Name:dd
Age:3

Practical No.4C

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

login.html

Code:

```
<!DOCTYPE html>
<!--
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.
-->
<html>
 <head>
 <title>TODO supply a title</title>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 </head>
 <body>
 <h1>Login Page</h1>
 <form action="login.jsp">
 Enter Username <input type="text" name="txtName"><br>
 Enter Password <input type="password" name="txtPass"><br>
 <input type="reset"><input type="submit" value="~~~LOGIN~~~">
 </form>
```

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

login.jsp

```
<%--
 Document : login
 Created on : 22 Jul, 2024, 8:13:51 AM
 Author : Admin
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"
import="java.sql.*"%>
<!DOCTYPE html>
<html>
 <head>
 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
 <title>JSP Page</title>
 </head>
 <body>
 <h1>Login JSP Page</h1>
 <%
 String uname = request.getParameter("txtName");
 String pass = request.getParameter("txtPass");
 try {
 Class.forName("org.apache.derby.jdbc.ClientDriver");
```

```
Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/shubhu",
"shubhu", "123");
PreparedStatement stmt = con.prepareStatement("select pass from user1 where
uname=?");
stmt.setString(1,  uname);
ResultSet rs = stmt.executeQuery();
if (rs.next()) {
if (pass.equals(rs.getString(1))) {
out.println("<h1>~~~ LOGIN SUCCESSFUL ~~~</h1>");
}
} else {
out.println("<h1>User Name doesn't exist!</h1>");
%>
<jsp:include page="register.html"></jsp:include>
<%
}
} catch (Exception e) {
out.println(e);
}
%>
</body>
</html>
```

Registration.html

Code:

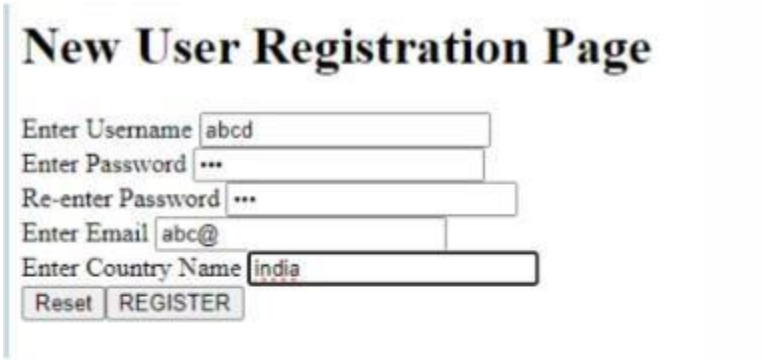
```
<html>
 <head>
 <title>TODO supply a title</title>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 </head>
 <body>
 <form action="register.jsp">
 <h1>New User Registration Page</h1>
 Enter Username <input type="text" name="txtName"><br>
 Enter Password <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 <input type="text" name="txtCon"><br>
 <input type="reset"><input type="submit" value="REGISTER">
 </form>
 </body>
</html>
```

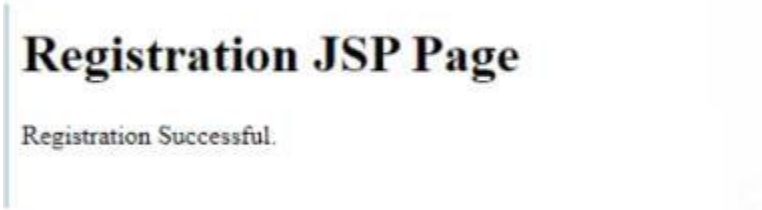
Register.jsp

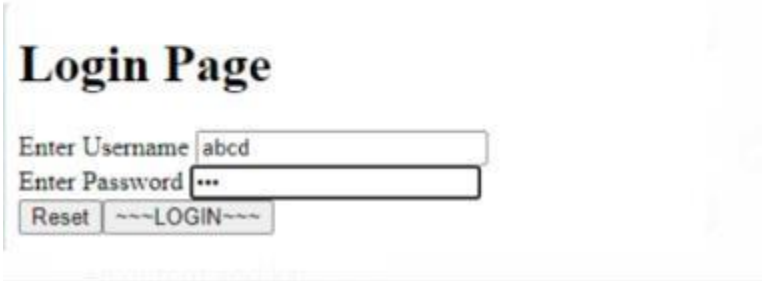
```
<html>
 <head>
 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
 <title>JSP Page</title>
 </head>
 <body>
 <h1>Registration JSP Page</h1>
 <%
 String uname=request.getParameter("txtName");
 String pass1=request.getParameter("txtPass1");
 String pass2=request.getParameter("txtPass2");
 String email=request.getParameter("txtEmail");
 String ctry=request.getParameter("txtCon");
 if(pass1.equals(pass2)){
 try{
 Class.forName("org.apache.derby.jdbc.ClientDriver");
 Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/shubhu",
"shubhu", "123");
 PreparedStatement stmt = con.prepareStatement("insert into user1
values(?,?,?,?)");
 stmt.setString(1, uname);
 stmt.setString(2, pass1);
 stmt.setString(3, email);
```

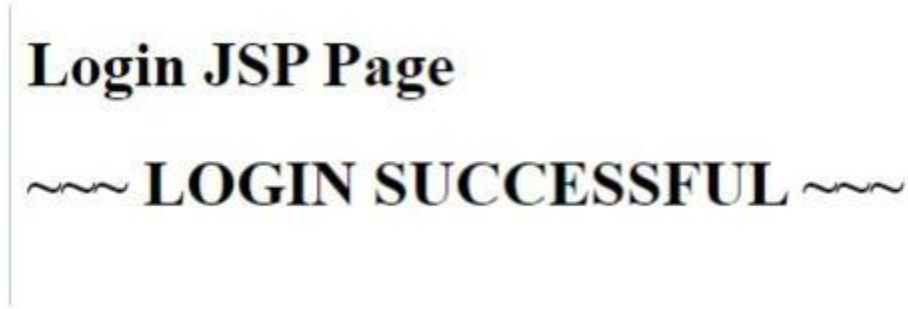
```
stmt.setString(4, ctry);
int row = stmt.executeUpdate();
if (row == 1) {
out.println("Registration Successful.");
} else {
out.println("Registration Failed!");
%>
<jsp:include page="register.html"></jsp:include>
<%
}
} catch (Exception e) {
out.println(e);
}
} else {
out.println("<h1>Password Mismatch</h1>");
%>
<jsp:include page="register.html"></jsp:include>
<%
}
%>
</body>
</html>
```

Output:


New User Registration Page
Enter Username abcd
Enter Password •••
Re-enter Password •••
Enter Email abc@
Enter Country Name india
Reset
REGISTER


Registration JSP Page
Registration Successful.


Login Page
Enter Username abcd
Enter Password •••
Reset
~~~LOGIN~~~


Login JSP Page
~~~ LOGIN SUCCESSFUL ~~~

Practical No.5A

Aim: 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.

Eno.html

```
<!DOCTYPE html>
<!--
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.
-->
<html>
 <head>
 <title>TODO supply a title</title>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 </head>
 <body>
 <form action="prac5.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>
```

Prac.jsp

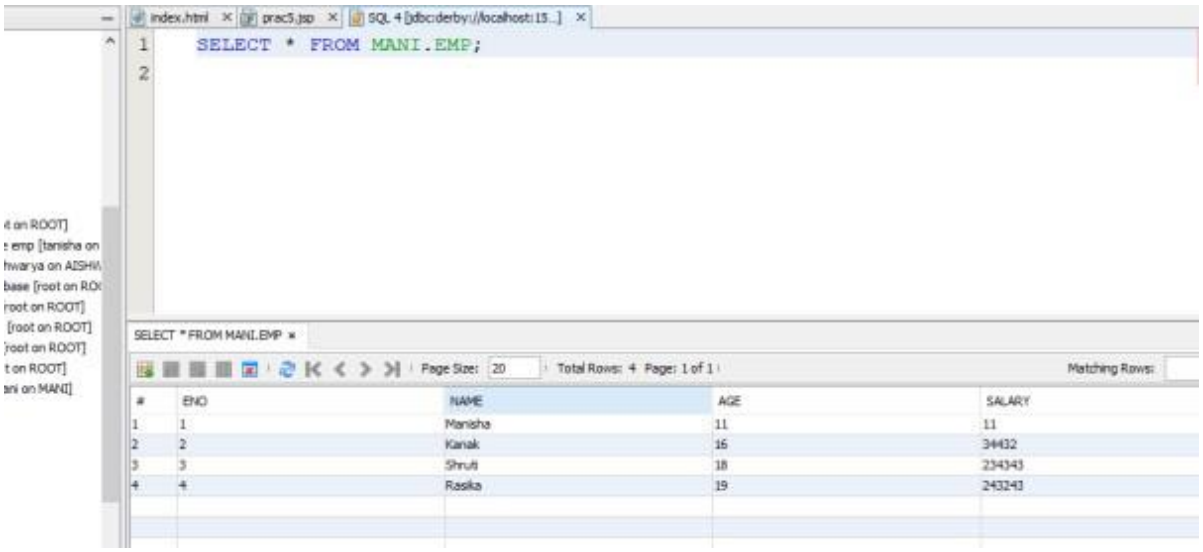
```
<%--
 Document : prac5
 Created on : 29 Jul, 2024, 8:01:37 AM
 Author : admin
--%>
<%@page contentType="text/html" pageEncoding="UTF-8"
import="java.sql.*"%>
<!DOCTYPE html>
<html>
 <head>
 <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
 <title>JSP Page</title>
 </head>
 <body>
 <h1>Employee Record Update</h1>
 <%
 String eno = request.getParameter("txtEno");
 String name = request.getParameter("txtName");
 String age = request.getParameter("txtAge");
 String sal = request.getParameter("txtSal");
```

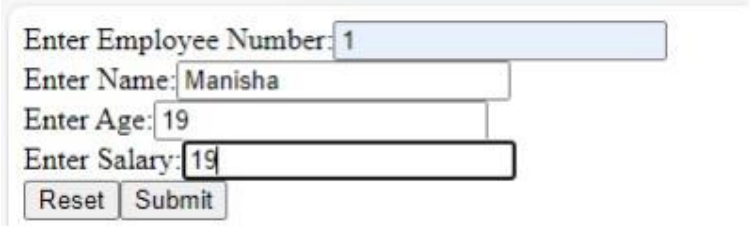
```
try
{
Class.forName("com.mysql.jdbc.Driver");
Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/Mani2","mani","man
i");
PreparedStatement stmt = con.prepareStatement("select * from EMP where
eno=?");
stmt.setString(1, eno);
ResultSet rs = stmt.executeQuery();
if(rs.next())
{
out.println("<h1>~~~~~~Employee"+name+"Exist~~~~</h1>");
PreparedStatement pst1 = con.prepareStatement("update emp set salary=?
where eno=?
");
PreparedStatement pst2 = con.prepareStatement("update emp set age=? where
eno=?");
pst1.setString(1,sal);
pst1.setString(2,eno);
pst2.setString(1,age);
pst2.setString(2,eno);
pst1.executeUpdate();
pst2.executeUpdate();
}
```

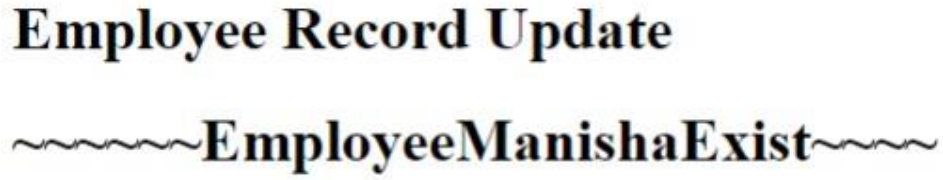
```
else
{
out.println("<h1>Employee Record not Exists!!!!!!!</h1>");
}
}
catch(Exception e)
{
out.println(e);
}

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

Output:


index.html
prac5.jsp
SQL 4 [jdbc:derby://localhost:15...]
1 SELECT * FROM MANI.EMP;
2
SELECT * FROM MANI.EMP
Page Size: 20
Total Rows: 4 Page: 1 of 1
Matching Rows:
ENO NAME AGE SALARY
1 1 Manisha 11 11
2 2 Kanak 16 34432
3 3 Shruti 18 234343
4 4 Rasika 19 243243


Enter Employee Number: 1
Enter Name: Manisha
Enter Age: 19
Enter Salary: 19
Reset
Submit


Employee Record Update
~~~~~~EmployeeManishaExist~~~~


SELECT * FROM MANI.EMP
Page Size: 20
Total Rows: 4 Page: 1 of 1
ENO NAME AGE SALARY
1 1 Manisha 19 19
2 2 Kanak 16 34432
3 3 Shruti 18 234343
4 4 Rasika 19 243243
~~~~~~

Practical No.5B

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

Code:

mani.jsp

```
<!DOCTYPE html>
<!--
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.
-->
<html>
 <head>
 <title>Expression Language Example</title>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 </head>
 <body>
 <form action="mani.jsp">
 Enter Student Name:<input type="text" name="stuname"><br>
 Enter Roll No:<input type="text" name="sturoll">
 <input type="submit" value="submit Details!!">
 </form>
```

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

Jsp1

```
<%@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>
 Student Name is ${param.stuname}<br>
 Student Roll No is ${param.rollno}<br>
 Hostname and Port number of Application: ${header.host}<br>
 Name of the Supporting browser:${header["user-agent"]}<br>
 <%
 application.setAttribute("author","ABC");
 application.setAttribute("site","Google.com");
 Cookie ck = new Cookie("ckname","Admin");
```

```
response.addCookie(ck);
%>
Attributes and cookies are set
<a href="mani1.jsp">Click here</a>
</body>
</html>
```

Jsp2

```
<%@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>
 Data from application scope:
 ${applicationScope.author}<br>
```

```
${applicationScope.Site}<br>
Data from cookie:${cookie.ckname.value}
</body>
</html>
```

Output:


Enter Student Name: mani
Enter Roll No: 12
submit Details!!


Student Name is mani
Student Roll No is
Hostname and Port number of Application: localhost:8080
Name of the Supporting browser:Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0.0.0 Safari/537.36 Edg/127.0.0.0
Attributes and cookies are set Click here

Data from application scope: ABC
Data from cookie:Admin

Practical No.5C

Aim: Create a JSP application to demonstrate the use of JSTL.

Code:

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

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
  <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
    <title>JSP with JSTL </title>
  </head>
  <body>
    <h1>Hello World!</h1>
    <c:set var="string1" value="This is thefirst string"/>
    <c:set var="string2" value="${fn:substringBefore(string1,'first')}"/>
    <p>Final Sub String: ${string2}</p>

    <c:set var="theString" value="I am a TEST string"/>
    <c:if test="${fn:contains(theString,'test')}">
      <p>Found test String</p>
    </c:if>
    <c:if test="${fn:contains(theString,'TEST')}">
      <p>Found TEST String</p>
    </c:if>

  </body>
</html>
```

Output:

Hello World!

Final Sub String: This is the

Found TEST String

Practical No.5C-2

Aim: Create a JSP page to retrive data from database .

Code:

```
<%--
   Document   : index
   Created on : 26 Aug, 2024, 8:33:42 AM
   Author     : Admin
--%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<%@taglib prefix="sql" uri="http://java.sun.com/jsp/jstl/sql" %>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>JSP Page</title>
   </head>
   <body>
      <h1>Showing Data from Database</h1>
      <sql:setDataSource var="dbcon" driver="org.apache.derby.jdbc.ClientDriver"
                  url="jdbc:derby://localhost:1527/stu1"
                  user="root" password="root"/>
      <sql:query dataSource="${dbcon}" var="result">
         SELECT * from stu
      </sql:query>
         <table border="1" width="100%">
            <tr>
               <th>Student Id</th>
               <th>First Name</th>
               <th>Last Name</th>
               <th>Age</th>
            </tr>
            <c:forEach var="row" items="${result.rows}">
               <tr>
                  <td><c:out value="${row.STUDENTID}"/></td>
```

```
                <td><c:out value="${row.FIRSTNAME}"/></td>
                <td><c:out value="${row.LASTNAME}"/></td>
                <td><c:out value="${row.AGE}"/></td>
              </tr>
            </c:forEach>
        </table>
 </body>
</html>
```

Output:

Showing Data from Database

Student Id	First Name	Last Name	Age
1	atul	mishra	21
2	sid	mishra	21
3	krishna	mishra	19

Practical No.6A

Aim: Create a Currency Converter application using EJB.

Code:

Index.html

```
<!DOCTYPE html>
<!--
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.
-->
<html>
   <head>
      <title>JAVA_Bean Implementation(Currency Conversion)</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <div align="center" style="border:2px solid black;">
         <form action="prac6" style="text:white;">
            Enter Amount : <input type="text" name="amount"><br><br>
            Select Conversion Type :<br><br>
            <input type="radio" name="type" value="r2d" checked>Rupees to
Dollar<br>
            <input type="radio" name="type" value="d2r" >Dollar to Rupees<br><br>
            <input type="reset">  <input type="submit" value="Convert">
         </form>
      </div>
   </body>
</html>
```

Bean1.java

```
package JBean;

import javax.ejb.Stateless;

@Stateless
public class Bean1 {

   public Bean1(){

   }
   public double rupees_to_dollar(double r){
      return r/65.65;
   }
   public double dollar_to_rupees(double d){
      return d*65.65;
   }
}
```

Prac6.java

```
import JBean.Bean1;
import java.io.IOException;
import java.io.PrintWriter;
import javax.ejb.EJB;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 *
 * @author Admin
 */
@WebServlet(urlPatterns = {"/prac6"})
public class prac6 extends HttpServlet {
```

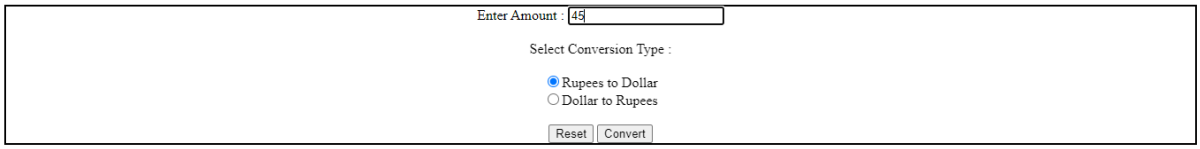
```
  @EJB Bean1 obj;
   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
          throws ServletException, IOException {
       response.setContentType("text/html;charset=UTF-8");

          PrintWriter out = response.getWriter();

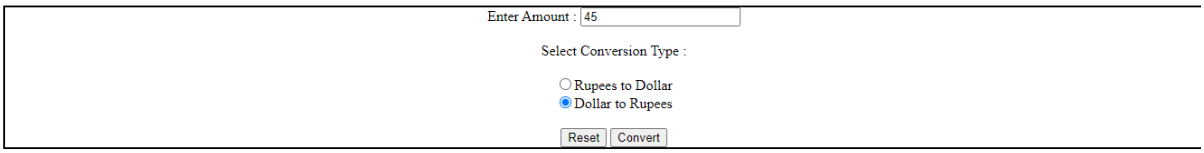
          double amt = Double.parseDouble(request.getParameter("amount"));
          if (request.getParameter("type").equals("r2d")) {
             out.println("<h1>" + amt + " Rupees = " + obj.rupees_to_dollar(amt) + "
Dollors</h1>");
          }
          if (request.getParameter("type").equals("d2r")) {
             out.println("<h1>" + amt + " Dollors = " + obj.dollar_to_rupees(amt) + "
Rupees</h1>");

       }
    }
}
```

Output:



45.0 Rupees = 0.6854531607006854 Dollors



45.0 Dollors = 2954.2500000000005 Rupees

Practical No.6B

Aim: Develop a Simple Room Reservation System Application using EJb.

Code:

Index.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="Book Room">
</form>
```

RRBean.java

```
package mybeans;
import javax.ejb.Stateless;
import java.sql.*;
@Stateless
public class RRBean {
public RRBean(){}
public String roomBook(String rt, String cn, String cm){
String msg="";
try{
Class.forName("com.mysql.jdbc.Driver");
Connection con =
DriverManager.getConnection("jdbc:derby://localhost:1527/room","root","root"
);
String query="select * from roombook where RoomType=? and status='Not
Booked'";
PreparedStatement pst = con.prepareStatement(query);
```

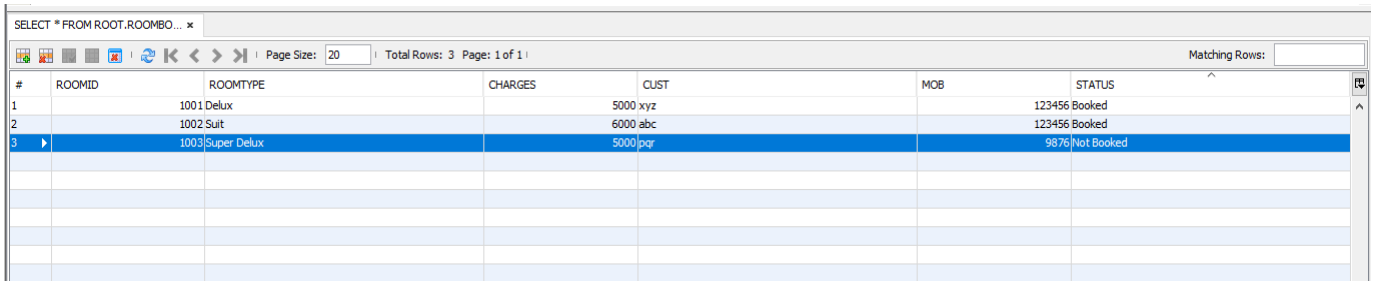
```
pst.setString(1,rt);
ResultSet rs= pst.executeQuery();
if(rs.next()){
 String rno=rs.getString(1);
PreparedStatement stm1 = con.prepareStatement("update roombook set cust=?
where RoomId=? ");
PreparedStatement stm2 = con.prepareStatement("update roombook set mob=?
where RoomId=? ");
PreparedStatement 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 <br> Charges = "+rs.getString(3);
}
else
{
msg = "Room "+rt+ " currently Not available";
}
}catch(Exception e){msg=""+e;}
return msg;}}
```

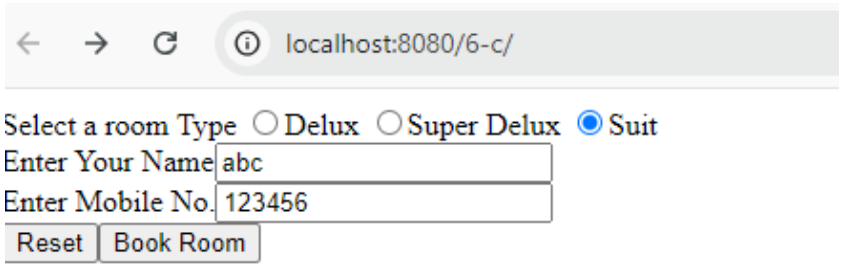
RBServlet.java

```
package mypack;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import javax.ejb.EJB;
import javax.servlet.annotation.WebServlet;
import mybeans.RRBean;
@WebServlet(urlPatterns = {"/RBServlet"})
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(msg);
}}
```

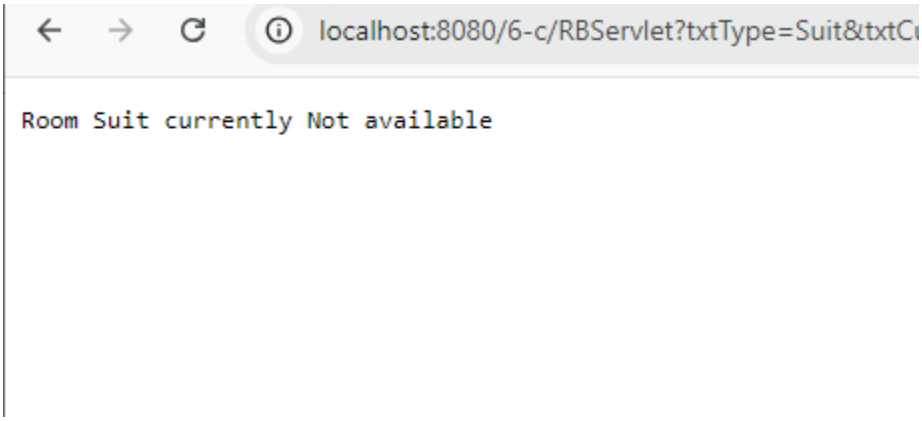
Output:-





Page Size: 20 Total Rows: 3 Page: 1 of 1 Matching Rows:

#	ROOMID	ROOMTYPE	CHARGES	CUST	MOB	STATUS
1	1001	Delux	5000	xyz	123456	Booked
2	1002	Suit	6000	abc	123456	Not Booked
3	1003	Super Delux	5000	pqr	9876	Not Booked



Practical No.6C

Aim :- Create a Simple Shopping cart application using EJB [Stateful Session bean] .

Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<center>
<table border="2">
<tr>
<th>Book name</th>
<th>add book</th>
<th>Remove book</th>
</tr>
<tr>
<td>Effective Java</td>
<td><a href="MyItem?x=1&ti=Effictive Java">add book</a></td>
<td><a href="MyItem?x=2&ti=Effictive Java">remove book</a></td>
</tr>
<tr>
<td>Head First Java</td>
<td><a href="MyItem?x=1&ti=Head First Java">add book</a></td>
<td><a href="MyItem?x=2&ti=Head First Java">remove book</a></td>
</tr>
<tr>
<td>Thinking in java</td>
<td><a href="MyItem?x=1&ti=Thinking in java">add book</a></td>
```

```
<td><a href="MyItem?x=2&ti=Thinking in java">remove book</a></td>
</tr>
<tr>
<td>Clean Code</td>
<td><a href="MyItem?x=1&ti=Clean Code">add book</a></td>
<td><a href="MyItem?x=2&ti=Clean Code">remove book</a></td>
</tr>
<tr>
<td>Java For Dummies</td>
<td><a href="MyItem?x=1&ti=Java For Dummies">add book</a></td>
<td><a href="MyItem?x=2&ti=Java For Dummies">remove book</a></td>
</tr>
<tr>
<td colspan="3" style="text-align: center;">
<a href="MyItem?x=3" target="_blank">Display Book Cart</a>
</td>
</tr>
</table>
</center>
</body>
</html>
```

ShoppingCart.java

```
package com.test;

import javax.ejb.Stateful;
import java.util.ArrayList;
/**
 *
 * @author Atul
 */
@Stateful
public class ShoppingCart implements ShoppingCartLocal {
private ArrayList<String>cart;
public ShoppingCart()
{
```

```
    cart=new ArrayList();
}
    @Override
    public void AddBook(String Title) {
        cart.add(Title);
    }
    @Override
    public void RemoveBook(String Title) {
        try{
            cart.remove(Title);
        }catch(Exception ex)
        {
            System.out.println(ex.getMessage());
            throw ex;
        }
    }

    @Override
    public ArrayList ListCartItems() {
        return cart;
    }
}
```

MyItem.java

```
package com.test;

import java.io.IOException;
import java.io.PrintWriter;
import java.util.ArrayList;
import javax.ejb.EJB;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```
/**
 *
 * @author Admin
 */
@WebServlet(name = "MyItem", urlPatterns = {"/MyItem"})
public class MyItem extends HttpServlet {
@EJB
private ShoppingCartLocal shoppingcart;

   protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
         throws ServletException, IOException {
      response.setContentType("text/html;charset=UTF-8");
      try (PrintWriter out = response.getWriter())
         int x=Integer.parseInt(request.getParameter("x"));
         String title=request.getParameter("ti");
         if (x==1)
         {
            shoppingcart.AddBook (title);
         response.sendRedirect("index.html");
         }
         else if (x==2)
         {
            shoppingcart. RemoveBook (title);
         response.sendRedirect("index.html");
         }
         else{
            ArrayList<String> allitems=shoppingcart.ListCartItems();
            for(int i=0;i<allitems.size();i++){
               out.println(allitems.get(i) +"<br>");
            }
         }
         out.println("</body>");
         out.println("</html>");
      }
   }
```

```
}
```

ShoppingCartLocal.java

```
package com.test;

import java.util.ArrayList;
import javax.ejb.Local;


/**
 *
 * @author Atul
 */
@Local
public interface ShoppingCartLocal {

   void AddBook(String Title);

   void RemoveBook(String Title);

   ArrayList ListCartItems();

}
```

Output:

localhost:8080/Prac6-c/index.html

Book name	add book	Remove book
Effective Java	add book	remove book
Head First Java	add book	remove book
Thinking in java	add book	remove book
Clean Code	add book	remove book
Java For Dummies	add book	remove book
Display Book Cart		

localhost:8080/Prac6-c/MyItem?x=3

Effictive Java
Head First Java
Clean Code
Java For Dummies

Practical No.7A

Aim:- Develop a simple EJB application to demonstrate Servlet Hit count using Singleton Session Beans.

Code:

ServletClient.java:

```
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());
   }
}
```

CountServletHitBean.java

```
package ejb;

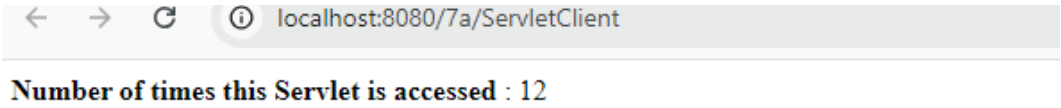
import javax.ejb.Singleton;

@Singleton
public class CountServletHitsBean {

   private int hitCount;

   public synchronized int getCount() {
      return hitCount++;
   }
}
```

Output:


localhost:8080/7a/ServletClient
Number of times this Servlet is accessed : 12

Practical No.7B

Aim :- Develop simple visitor Statistics Applicatrion using Message Driven Beans [Stateless Session Bean].

Code:

TestingMessageBean.java

```
package com.test;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.ejb.ActivationConfigProperty;
import javax.ejb.MessageDriven;
import javax.jms.JMSException;
import javax.jms.Message;
import javax.jms.MessageListener;
import javax.jms.TextMessage;
@MessageDriven(activationConfig = {
@ActivationConfigProperty(propertyName = "destinationLookup", propertyValue
=
"jms/MyDestination")
@ActivationConfigProperty(propertyName = "destinationType", propertyValue =
"javax.jms.Queue")
})
public class TesstingMessageBean implements MessageListener {
public TesstingMessageBean() {
}
@Override
public void onMessage(Message message) {
TextMessage tm=(TextMessage)message;
try {
System.out.println("Recived Message"+tm.getText());
} catch (JMSException ex) {
System.out.println("Error"+ex.getMessage());
}
}
```

```
}
```

TestingServletMessageMBD.java

```
package com.test;
import java.io.IOException;
import java.io.PrintWriter;
import javax.annotation.Resource;
import javax.inject.Inject;
import javax.jms.JMSConnectionFactory;
import javax.jms.JMSContext;
import javax.jms.Queue;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet(name = "TestingServletForMDB", urlPatterns =
{"/TestingServletForMDB"})
public class TestingServletForMDB extends HttpServlet {
@Resource(mappedName = "jms/MyDestination")
private Queue myDestination;
@Inject
@JMSConnectionFactory("java:comp/DefaultJMSConnectionFactory")
private JMSContext context;
protected void processRequest(HttpServletRequest request, HttpServletResponse
response)
throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");
try (PrintWriter out = response.getWriter()) {
try{
for(int i=1;i<=4;i++)
{
String message = " Sending " + i + " Visitors";
context.createProducer().send(myDestination, message);
```

```
}
out.println("All messages are sent");
}
catch(Exception ex){
out.println("Error"+ex.getMessage());
}
out.println("</body>");
out.println("</html>");
}
}
// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the
+
sign on the left to edit the code.">
@Override
protected void doGet(HttpServletRequest request, HttpServletResponse
response)
throws ServletException, IOException {
processRequest(request, response);
}

@Override
protected void doPost(HttpServletRequest request, HttpServletResponse
response)
throws ServletException, IOException {
processRequest(request, response);
}
@Override
public String getServletInfo() {
return "Short description";
}// </editor-fold>
private void sendJMSMessageToMyDestination(String messageData) {
context.createProducer().send(myDestination, messageData);
}
}
```

Output:-

Output:

All messages are sent

```
Info:   Loading application [prac7a] at [/pra
Info:   prac7a was successfully deployed in 1
Info:   Recived Message Sending 1 Visitors
Info:   Recived Message Sending 3 Visitors
Info:   Recived Message Sending 4 Visitors
Info:   Recived Message Sending 2 Visitors
Info:   Recived Message Sending 1 Visitors
Info:   Recived Message Sending 2 Visitors
Info:   Recived Message Sending 3 Visitors
Info:   Recived Message Sending 4 Visitors
```

Practical No.7C

Aim :- Develop simple Marks Entry Application to demonstrate accessing Database using EJB.

Code:

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:module/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>
```

MarksEntryBean.java

```
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:derby://localhost:1527/Prac7-
a", "TYITa57", "1234");
         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);
      }
   }
}
```

Output:

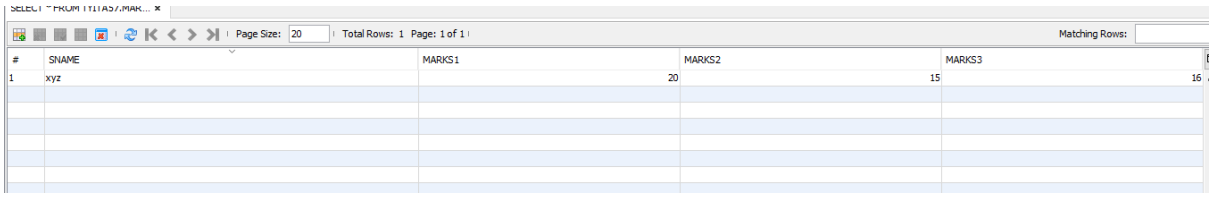
Enter Details

Enter student's name: xyz
Enter subject 1 marks: 20
Enter subject 2 marks: 15
Enter subject 3 marks: 16
Submit

Marks entered successfully..!!!!

Enter Details

Enter student's name:
Enter subject 1 marks:
Enter subject 2 marks:
Enter subject 3 marks:
Submit



Practical No.8A

Aim :- Develop simple Inventory Application Using JPA .

Code:

Index.html

```
<!DOCTYPE html>
<html>
   <head>
      <title>TODO supply a title</title>
      <meta charset="UTF-8">
      <meta name="viewport" content="width=device-width, initial-scale=1.0">
   </head>
   <body>
      <form action="AddInvetory" method="post">
         <table>
            <tr>
               <td colspan="2" align="center"> <b> Add the item in inventory</b></td>
            </tr>
            <tr>
             <td>SKU:</td>
             <td> <input type="number" name="sku"/></td>
          </tr>
          <tr>
             <td>Item Name:</td>
             <td> <input type="text" name="itemname" maxlength="25"
size="50"/></td>
          </tr>
          <tr>
             <td>Price:</td>
             <td> <input type="number" name="itemprice"/></td>
          </tr>
          <tr>
             <td>Quantity:</td>
             <td> <input type="number" name="itemqty"/></td>
```

```
          </tr>
          <tr>
             <td colspan="2"> <input type="submit" name="AddToInventory"
value="AddToInventory">
             </td>
          </tr>
          </table>
       </form>
   </body>
</html>
```

AddInvetory.java

```
package com.test;

import java.io.IOException;
import java.io.PrintWriter;
import javax.persistence.EntityManager;
import javax.persistence.EntityManagerFactory;
import javax.persistence.EntityTransaction;
import javax.persistence.Persistence;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 *
 * @author Admin
 */
@WebServlet(name = "AddInvetory", urlPatterns = {"/AddInvetory"})
public class AddInvetory extends HttpServlet {

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

```
        throws ServletException, IOException {
    response.setContentType("text/html;charset=UTF-8");
    try (PrintWriter out = response.getWriter()) {
        EntityManagerFactory
entityManagerFactory=Persistence.createEntityManagerFactory("Practical_8_AP
U");
        EntityManager
entityManager=entityManagerFactory.createEntityManager();
        EntityTransaction entityTransaction=entityManager.getTransaction();
        Inventory i1=new Inventory();
        i1.setSku(Integer.parseInt(request.getParameter("sku")));
        i1.setItemname(request.getParameter("itemname"));
        i1.setItemqty(Integer.parseInt(request.getParameter("itemqty")));
        i1.setItemprice(Integer.parseInt(request.getParameter("itemprice")));
        entityTransaction.begin();
        entityManager.persist(i1);
        entityTransaction.commit();
        out.println("<h1>Record Added</h1>");
         out.println("</body>");
        out.println("</html>");
    }
  }
}
```

Inventory.java

```
package com.test;

import java.io.Serializable;
import javax.persistence.Basic;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.NamedQueries;
import javax.persistence.NamedQuery;
import javax.persistence.Table;
```

```
import javax.validation.constraints.NotNull;
import javax.validation.constraints.Size;
import javax.xml.bind.annotation.XmlRootElement;

/**
 *
 * @author Admin
 */
@Entity
@Table(name = "INVENTORY")
@XmlRootElement
@NamedQueries({
   @NamedQuery(name = "Inventory.findAll", query = "SELECT i FROM Inventory
i"),
   @NamedQuery(name = "Inventory.findBySku", query = "SELECT i FROM
Inventory i WHERE i.sku = :sku"),
   @NamedQuery(name = "Inventory.findByItemname", query = "SELECT i FROM
Inventory i WHERE i.itemname = :itemname"),
   @NamedQuery(name = "Inventory.findByItemprice", query = "SELECT i FROM
Inventory i WHERE i.itemprice = :itemprice"),
   @NamedQuery(name = "Inventory.findByItemqty", query = "SELECT i FROM
Inventory i WHERE i.itemqty = :itemqty")})
public class Inventory implements Serializable {

   private static final long serialVersionUID = 1L;
   @Id
   @Basic(optional = false)
   @NotNull
   @Column(name = "SKU")
   private Integer sku;
   @Size(max = 255)
   @Column(name = "ITEMNAME")
   private String itemname;
   @Column(name = "ITEMPRICE")
   private Integer itemprice;
   @Column(name = "ITEMQTY")
   private Integer itemqty;
```

```
public Inventory() {
}

public Inventory(Integer sku) {
   this.sku = sku;
}

public Integer getSku() {
   return sku;
}

public void setSku(Integer sku) {
   this.sku = sku;
}

public String getItemname() {
   return itemname;
}

public void setItemname(String itemname) {
   this.itemname = itemname;
}

public Integer getItemprice() {
   return itemprice;
}

public void setItemprice(Integer itemprice) {
   this.itemprice = itemprice;
}

public Integer getItemqty() {
   return itemqty;
}

public void setItemqty(Integer itemqty) {
```

```
        this.itemqty = itemqty;
    }

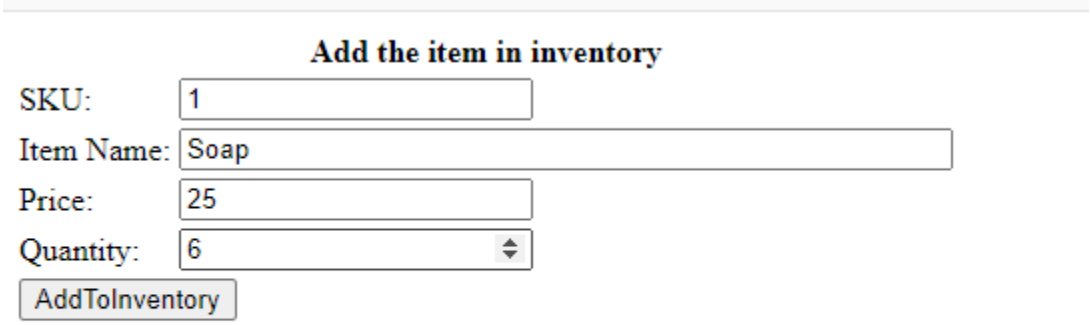
    @Override
    public int hashCode() {
        int hash = 0;
        hash += (sku != null ? sku.hashCode() : 0);
        return hash;
    }

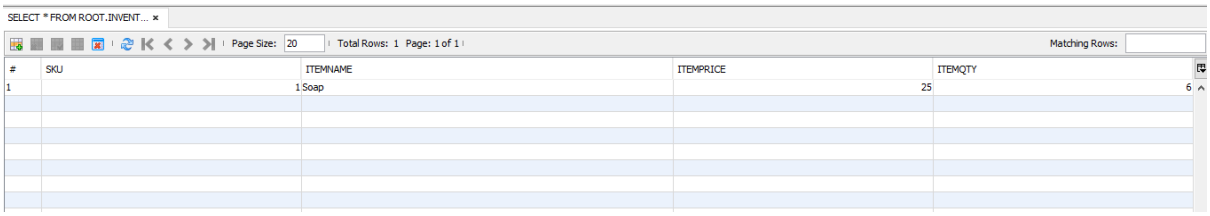
    @Override
    public boolean equals(Object object) {
        // TODO: Warning - this method won't work in the case the id fields are not
set
        if (!(object instanceof Inventory)) {
            return false;
        }
        Inventory other = (Inventory) object;
        if ((this.sku == null && other.sku != null) || (this.sku != null &&
!this.sku.equals(other.sku))) {
            return false;
        }
        return true;
    }

    @Override
    public String toString() {
        return "com.test.Inventory[ sku=" + sku + " ]";
    }

}
```

Output:-


Add the item in inventory
SKU:
1
Item Name:
Soap
Price:
25
Quantity:
6
AddToInventory


SELECT * FROM ROOT.INVENT...
Page Size: 20
Total Rows: 1 Page: 1 of 1
Matching Rows:
SKU ITEMNAME ITEMPRICE ITEMQTY
1 1 Soap 25 6