

Practical: 1**(A) Create a simple calculator application using servlet****Calculator.html**

```
<html><head>
<title>Calculator</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
</head><body bgcolor="lightblue"><center>
<form method=post action="calcserlet"><br><br>
<marquee><p>Arithmetic Calculator for Addition/Subtraction/Multiplication/Division</p></marquee>
No-1<input type=text name="t1"><br><br>
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">
<input type="submit" value="Submit" name="btn">
<input type="reset" value="cancel" name="btn">
</form></body></html>
```

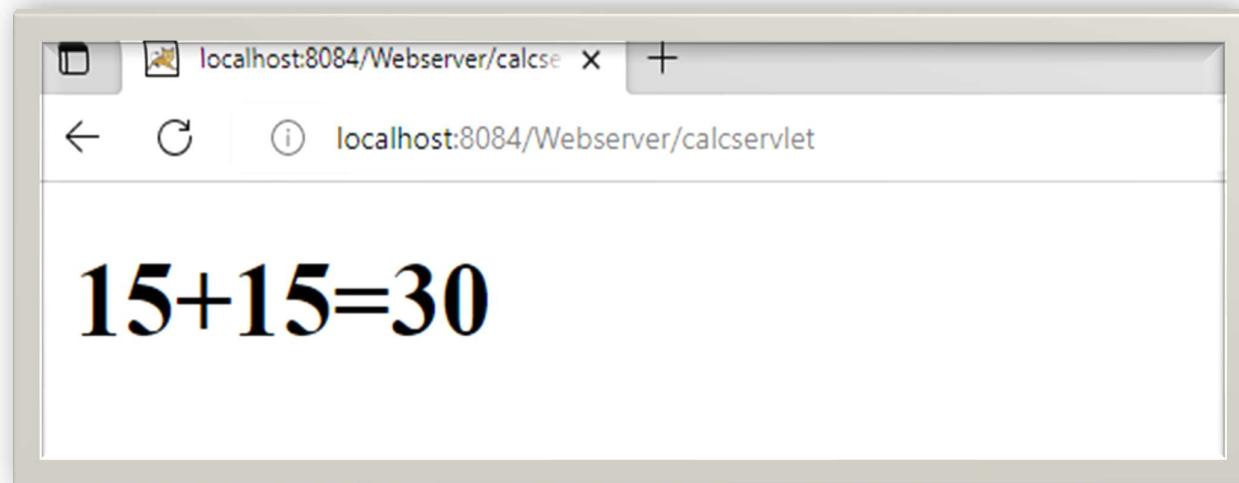
Calcserlet.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
//@author Nandeshwar Soni
public class calcserlet extends HttpServlet {
@Override
public void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");
try (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("+")) if (op.equals("-")) {
c = a - b;
} else if (op.equals("*")) {
c = a * b;
} else if (op.equals("/")) {
c = a / b;
} else {
c = a + b;
}
out.println("<b>" + a + op + b + "=" + c + "<b>");
}}}
```

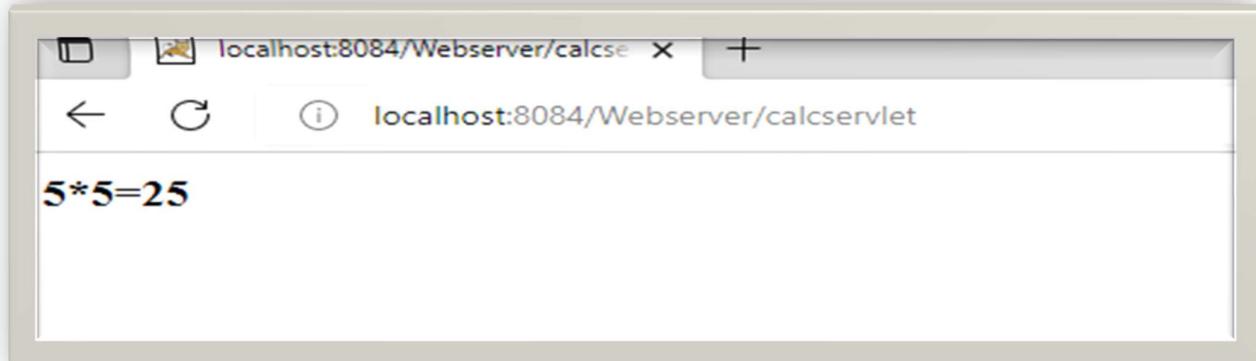
Output: -

The screenshot shows a window titled "Arithmetic Calculator For Addition/Subtraction/Multiplication/Division/". It contains two input fields labeled "No-1" and "No-2", both containing the value "15". Below the inputs are four buttons: "+", "-", "*", and "/". To the right of these buttons are two more buttons: "Submit" and "cancel".

Addition



Multiplication



(B) Create a servlet for a login page. If the username and password are correct then it says message.

Login.html

```
<html>
<head>
<title>Login Form</title>
</head>
<form action="LoginServlet" >
Enter User ID<input type="text" name="txtId"><br>
Enter Password<input type="password" name="txtPass"><br>
<input type="reset" value="Clear">
<input type="submit" value=" Click to Login " >
</form>
</html>
```

LoginServlet.java

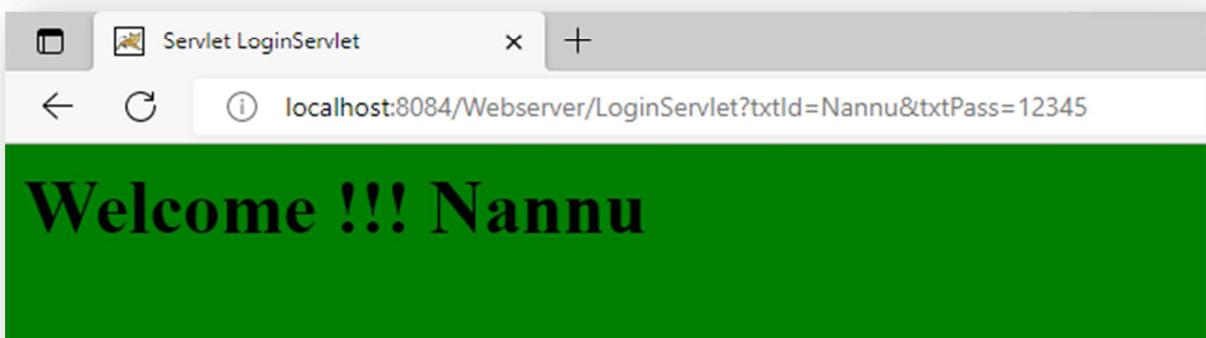
```
import java.io.*;
import javax.servlet.ServletException;
import javax.servlet.http.*;

public class LoginServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();

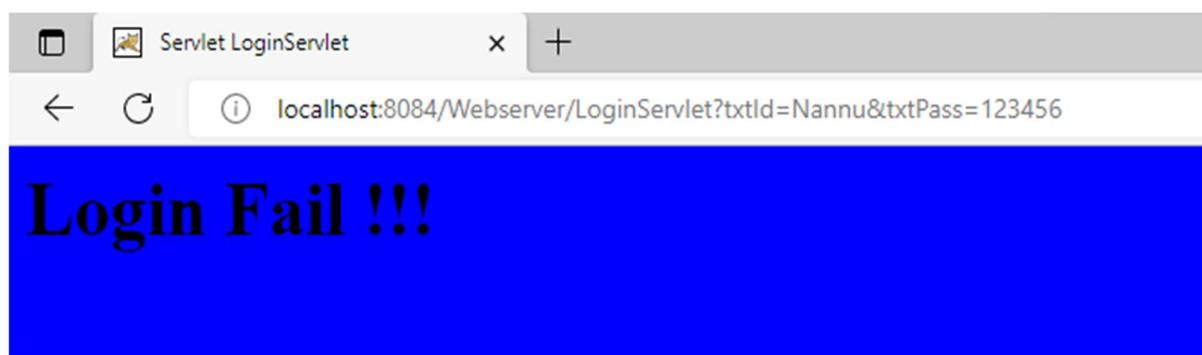
out.println("<html><head><title>Servlet LoginServlet</title></head>");
String uname = request.getParameter("txtId");
String upass = request.getParameter("txtPass");
if (uname.equals("Nannu") && upass.equals("12345"))
{
out.println("<body bgcolor=green >");
out.println("<h1>Welcome !!! " + uname + "</h1>");
}
else
{
out.println("<body bgcolor=blue >");
out.println("<h1> Login Fail !!! </h1>");}
out.println("</body></html>");
}
}
```

OUTPUT :-

A screenshot of a web browser window titled "Login Form". The address bar shows "localhost:8084/Webserver/login.html". The page contains a form with two text input fields: "Enter User ID" containing "Nannu" and "Enter Password" containing "12345". Below the inputs are two buttons: "Clear" and "Click to Login".



A screenshot of a web browser window titled "Login Form". The address bar shows "localhost:8084/Webserver/login.html". The page contains a form with two text input fields: "Enter User ID" containing "Nannu" and "Enter Password" containing "123456". Below the inputs are two buttons: "Clear" and "Click to Login".



- (C) 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.**

Index.html

```
<html>
<head>
<title>Registration Page</title>
</head>
<body>
<form action="RegistrationServlet" >
<H1>Welcome to Registration Page</H1>
Enter User Name <input type="text" name="txtuid"><br>
Enter Password <input type="password" 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>
```

RegistrationServlet.java

```
import java.io.IOException; import java.io.PrintWriter; import java.sql.Connection; import java.sql.DriverManager;
import java.sql.PreparedStatement; import java.sql.SQLException; import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet; import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class RegistrationServlet extends HttpServlet {
public void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
response.setContentType("text/html;charset=UTF-8");
PrintWriter out = response.getWriter();
String username = request.getParameter("txtuid");
String password = request.getParameter("txtpass");
String email = request.getParameter("txtEmail");
String country = request.getParameter("txtCon");
try{Class.forName("com.mysql.jdbc.Driver");
Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/logindb","root","root");
PreparedStatement pst = con.prepareStatement("insert into user values(?,?,?,?,?)");
pst.setString(1,username);
pst.setString(2,password);
pst.setString(3,email);
pst.setString(4,country);
int row = pst.executeUpdate();
out.println("<h1>" + row + " Thank you Details Inserted Succesfully :)" );
} catch( ClassNotFoundException | SQLException e){out.println(e);
}}
```

OUTPUT:-

localhost:8084/pract1c/index.html

Welcome to Registration Page

Enter User Name

Enter Password

Enter Email

Enter Country



1Thank you Details Inserted Successfully :)

Database Details:-

```
mysql> USE LOGINDB;
Database changed
mysql> SELECT * FROM USER;
+-----+-----+-----+-----+
| username | password | email           | country |
+-----+-----+-----+-----+
| admin    | admin    | admin@admin.com | India   |
| nannu    | 12345   | nannu@admin.com | India   |
| Nannu2022 | 12345   | Nannu@gmail.com | India   |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM USER;
+-----+-----+-----+-----+
| username | password | email           | country |
+-----+-----+-----+-----+
| Abhishek | 12345   | abhishek@gmail.com | India   |
| admin    | admin    | admin@admin.com | India   |
| Nandeshwar_soni | 12345 | Nannu.s@outlook.com | India   |
| nannu    | 12345   | nannu@admin.com | India   |
| Nannu2022 | 12345   | Nannu@gmail.com | India   |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

Practical 2:-

(A) 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.

Login.html

```
<html>
<head><title>Req Dispatcher</title>
</head>
<body>
<left>
<form action="Servletone" method="post">
Enter Username:<input type="text" name="uname"><br><br/>
Enter Password:<input type="password" name="passwd"><br><br>
<input type="submit" value="Login">
<input type="reset" value="cancel">
</form>
</center>
</body>
</html>
```

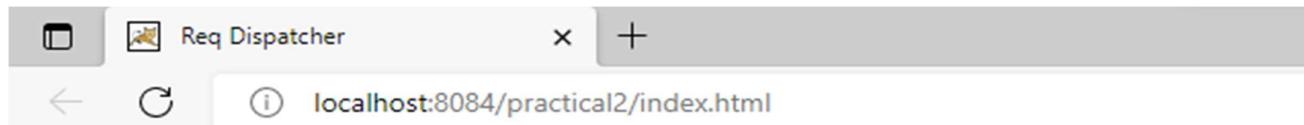
Servleton.java

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Servleton extends HttpServlet {
public void doPost (HttpServletRequest request, HttpServletResponse response)throws ServletException,
IOException
{try{
response.setContentType("text/html");
PrintWriter pw = response.getWriter();
pw.println("<html><body>");
pw.println("<center>");
String user=request.getParameter("uname");
String pass=request.getParameter("passwd");
if (pass.equals("Servlet"))
{RequestDispatcher rd=request.getRequestDispatcher("Servlettwo");
rd.forward(request, response);
}
else
{
pw.println("<br>");
pw.println("User ID and password is incorrect ! ");
pw.println("<br><br>");
RequestDispatcher rd=request.getRequestDispatcher("/index.html");
rd.include(request, response);
pw.println("</body></html>");
}
catch(Exception e)
{
System.out.println(e);
}}}
```

Servleettwo.java

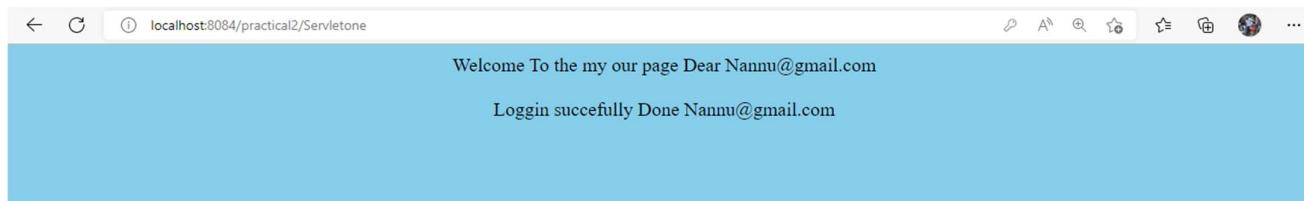
```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class Servleettwo extends HttpServlet {
public void doPost (HttpServletRequest request, HttpServletResponse response) throws ServletException,
IOException
{try{
    response.setContentType("text/html");
    PrintWriter pw = response.getWriter();
    pw.println("<html><body bgcolor=skyblue>");
    pw.println("<center>");
    String user=request.getParameter("uname");
    pw.println("Welcome To the my our page Dear "+user);
    pw.println("<br><br>");
    pw.println("Loggin succefully Done "+user);

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

OUTPUT :-

Enter Username:

Enter Password: 



User ID and password is incorrect !

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

Cookie.html

```
<html>
<head><title>Cookie Demo</title></head>
<body>
<form action="page1" >
Enter Your Name <input type="text" name="txtName"><br>
<input type="submit" value="~~~ Click to Enter ~~~">
</form>
</body>
</html>
```

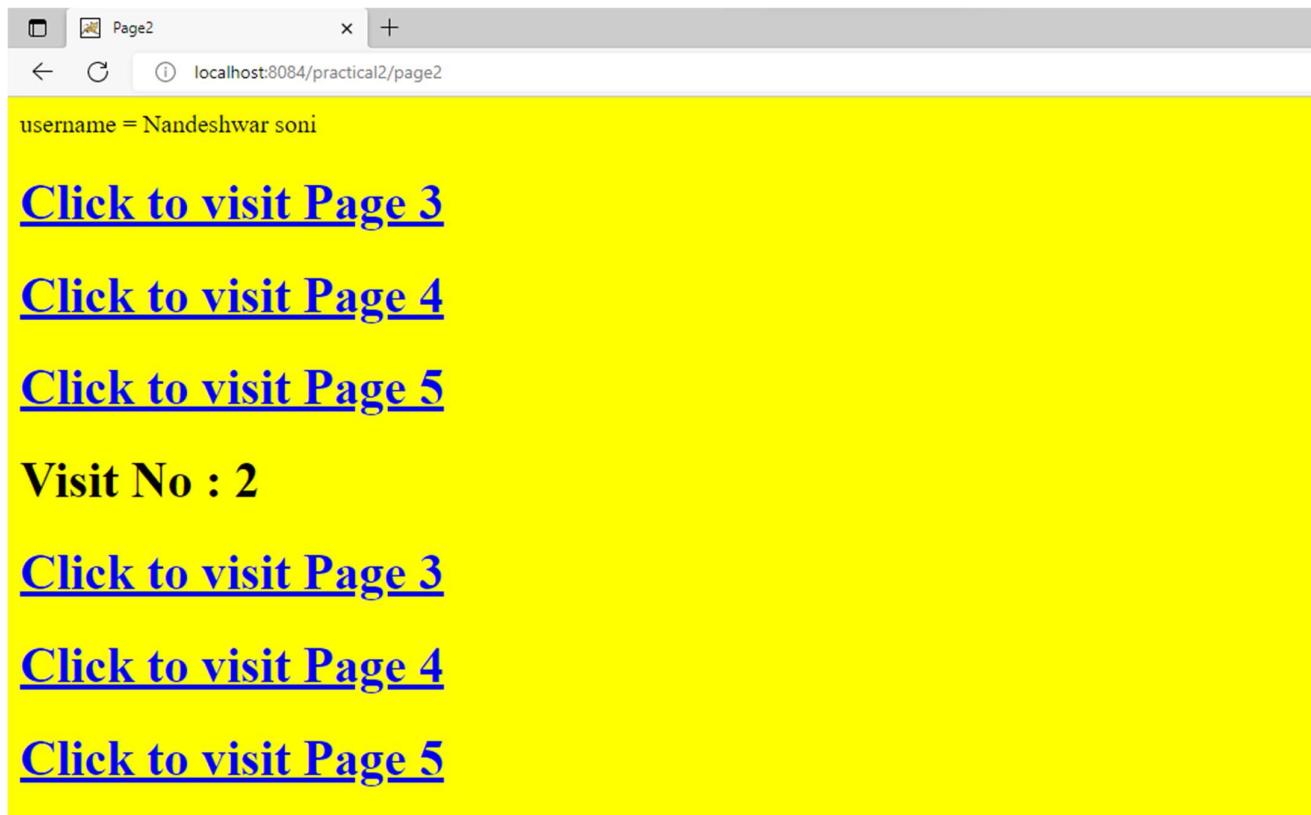
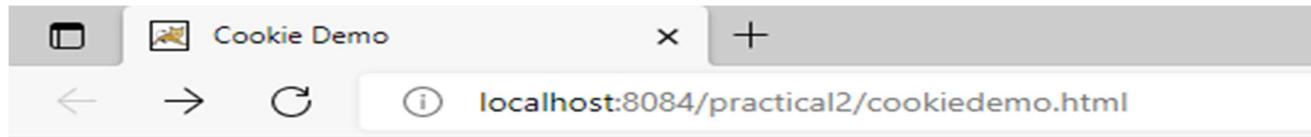
page1.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.Cookie;
public class page1 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("<html><head><title>Page1</title></head>");
out.println("<body bgcolor=pink >");
String uname = request.getParameter("txtName");
out.println("<h1>~~~ Welcome "+uname+"</h1>");
Cookie ck1 = new Cookie("username", uname);
Cookie ck2 = new Cookie("visit","1");
response.addCookie(ck1); response.addCookie(ck2);
out.println("<h1><a href=page2 >Click to visit Page 2 </a></h1>");
out.println("</body>");
out.println("</html>");
}
}
```

Page2.java

```
import java.io.*;
import javax.servlet.ServletException;
import javax.servlet.http.*;
public class page2 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("<html><head><title>Page2</title></head>");
out.println("<body bgcolor=yellow >");
Cookie [] ck = request.getCookies();
for(int i=0;i<ck.length;i++){
if(ck[i].getName().equals("visit")){
int count = Integer.parseInt(ck[i].getValue())+1;
out.println("<h1>Visit No : "+count+"</h1>");
ck[i] = new Cookie("visit",count+"");
response.addCookie(ck[i]);
}
else {
out.println(ck[i].getName()+" = "+ck[i].getValue()); }
out.println("<h1><a href=page3 >Click to visit Page 3 </a></h1>");
out.println("<h1><a href=page4 >Click to visit Page 4 </a></h1>");
out.println("<h1><a href=page5 >Click to visit Page 5 </a></h1>");
out.println("</body>");
out.println("</html>"); }}}
```

Output:-



(C) 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.

Sessiondemo.html

```
<html>
<head><title>Session Demo</title></head>
<form action="sessiondemo1" method="get" >
Enter User ID <input type="text" name="txtName"><br>
<input type="reset" ><input type="submit" >
</form>
</html>
```

Sessiondemo1.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
public class sessiondemo1 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("<html><head><title>Servlet Page1</title></head>");
HttpSession hs = request.getSession(true);
if(hs.isNew()){
out.println("<body bgcolor=aquablue>");
String name = request.getParameter("txtName");
hs.setAttribute("uname", name);
hs.setAttribute("visit", "1");
out.println("<h1>Welcome First Time</h1>");}
else{
out.println("<h1>Welcome Again</h1>");
int visit = Integer.parseInt((String)hs.getAttribute("visit"))+1;
out.println("<h1>You Visited "+visit+"Times</h1>");
hs.setAttribute("visit", ""+visit);}
out.println("<h1>Your Session ID "+hs.getId()+"</h1>");
out.println("<h1>You Logged in at "+new java.util.Date(hs.getCreationTime())+"</h1>");
out.println("<h1><a href=sessiondemo2>Click for Page 2 </a></h1>"); 
out.println("<h1><a href=Page3>Click for Page 3 </a></h1>"); 
out.println("<h1><a href=Page4>Click for Page 4 </a></h1>"); 
out.println("<h1><a href=LogoutServlet>Click to Terminate Session </a></h1>"); 
out.println("</body>"); 
out.println("</html>"); 
}}
```

Sessiondemo2.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
public class sessiondemo2 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("<html><head><title>Servlet Page2</title></head>");
HttpSession hs = request.getSession(false);
out.println("<h1>Welcome Again on Page No. 2</h1>");
int visit = Integer.parseInt((String)hs.getAttribute("visit"))+1;
out.println("<h1>You Visited "+visit+"Times</h1>");
hs.setAttribute("visit", ""+visit);
out.println("<h1>Your Session ID "+hs.getId()+"</h1>");
out.println("<h1>You Logged in at "+new java.util.Date(hs.getCreationTime())+"</h1>");
out.println("<h1><a href=sessiondemo1>Click for Page 1 </a></h1>");
out.println("<h1><a href=Page3>Click for Page 3 </a></h1>");
out.println("<h1><a href=Page4>Click for Page 4 </a></h1>");
out.println("<h1><a href=LogoutServlet>Click for Terminate Session </a></h1>");
out.println("</body>");
out.println("</html>");
}}
```

LogoutServlet.java

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
public class LogoutServlet 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("<html><head><title>Servlet LogoutServlet</title></head>");
out.println("<body>");
javax.servlet.http.HttpSession hs = request.getSession();
if(hs != null) hs.invalidate();
out.println("<h1>You are Logged out now.....</h1>");
out.println("<h1><a href=sessiondemo.html>Click to visit home page</a></h1>");
out.println("</body>");
out.println("</html>")}}
```

OUTPUT: -

A screenshot of a web browser window titled "Session Demo". The address bar shows "localhost:8084/practical2/sessiondemo.html". The page contains a form with a text input field containing "Nandeshwar@2022" and two buttons: "Reset" and "Submit".

Enter User ID

A screenshot of a web browser window titled "Servlet Page1". The address bar shows "localhost:8084/practical2/sessiondemo1?txtName=ravi+verma". The page displays session information: "Welcome First Time", "Your Session ID 9C01ADCDCBED072079DBA425E4E3E6C8", "You Logged in at Thu Sep 15 04:26:47 IST 2022", and four blue hyperlinks: "Click for Page 2", "Click for Page 3", "Click for Page 4", and "Click to Terminate Session".

A screenshot of a web browser window titled "Servlet LogoutServlet". The address bar shows "localhost:8084/practical2/LogoutServlet". The page displays the message "You are Logged out now....." and a blue hyperlink "Click to visit home page".

You are Logged out now.....

Click to visit home page

Practical no: 4

(A) Develop a simple JSP application to display values obtained from the use of intrinsic objects of various types.

```
<%--  
Document : 4A  
Created on : 15 Sep, 2022, 4:39:13 AM  
Author : Nandeshwar Soni  
--%>  
<%@page contentType="text/html" pageEncoding="UTF-8"%>  
<html><head><title>Sample 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>
```

Output:-



Use of Intrinsic Objects in JSP

Request Object

Query String null
Context Path /practical4
Remote Host 0:0:0:0:0:0:1

Response Object

Character Encoding Type UTF-8
Content Type text/html;charset=UTF-8
Locale en_IN

Session Object

ID 3FBF3115EB1F8AE9D1B4E1290CF9DB88
Creation Time Thu Sep 15 04:40:53 IST 2022
Last Access Time Thu Sep 15 04:41:36 IST 2022

(4B). 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

```
<html><head><title>User Information Page</title>
</head>
<body>
<form action="Validate.jsp">
Enter Your Name<input type="text" name="name" ><br>
Enter Your Age<input type="text" name="age" ><br>
Select Hobbies
<input type="checkbox" name="hob" value="Dancing">Dancing
<input type="checkbox" name="hob" value="Reading">Reading Books
<input type="checkbox" name="hob" value="Football">Playing Football<br>
Enter E-mail<input type="text" name="email" ><br>
Select Gender
<input type="radio" name="gender" value="male">Male
<input type="radio" name="gender" value="female">Female
<input type="radio" name="gender" value="other">Other<br>
<input type="hidden" name="error" value="">
<input type="submit" value="Submit Form">
</form>
</body>
</html>
```

CheckerBean.java

```
package mypack;
public class CheckerBean {
private String name, age, hob, email, gender, error;
public CheckerBean(){error="";}
public void setName(String n){name=n;}
public void setAge(String a){age=a;}
public void setHob(String h){hob=h;}
public void setEmail(String e){email=e;}
public void setGender(String g){gender=g;}
public void setError(String e){error=e;}
public String getName(){return name;}
public String getAge(){return age;}
public String getHob(){return hob;}
public String getEmail(){return email;}
public String getGender(){return gender;}
public String getError(){return error;}
public boolean validate(){
boolean res=true;
if(name.trim().equals("")) {error+="<br>Enter First Name";res=false;}
if(age.length() > 2 )
{error+="<br>Age Invalid";res=false;}
return res;
}}
```

Validate.jsp

```
<html>
<head>
<title>JSP Page</title>
</head>
<body>
<h1>Validation Page</h1>
<jsp:useBean id="obj" scope="request" class="mypack.CheckerBean" >
<jsp:setProperty name="obj" property="*"/>

</jsp:useBean>
<%if(obj.validate())%
{%
<jsp:forward page="successful.jsp"/>
<% }
else {%
<jsp:include page="index.html"/>
<%}%
<%=obj.getError() %>
</body>
</html>
```

Successful.jsp

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>JSP Page</title>
</head>
<body>
<h1>DATA VALIDATED SUCCESSFULLY</h1>
</body>
</html>
```

OUTPUT:-

User Information Page

localhost:8084/practical4/index.html

Enter Your Name

Enter Your Age

Select Hobbies Dancing Reading Books Playing Football

Enter E-mail

Select Gender Male Female Other

JSP Page

localhost:8084/practical4/Validate.jsp?name=Nandeshwar+soni&age=22&hob=Dancing&email=Nannu%40outlook.com

DATA VALIDATED SUCCESSFULLY

User Information Page

localhost:8084/practical4/index.html

Enter Your Name

Enter Your Age

Select Hobbies Dancing Reading Books Playing Football

Enter E-mail

Select Gender Male Female Other

JSP Page

localhost:8084/practical4/Validate.jsp?name=Nandeshwar+soni&age=111&hob=Dancing&email=Nannu%40outlook.com

Validation Page

Enter Your Name

Enter Your Age

Select Hobbies Dancing Reading Books Playing Football

Enter E-mail

Select Gender Male Female Other

Age Invalid

(4C) Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC.

Registration.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>
<option>USA</option>
<option>Canada</option>
</select><br>
<input type="submit" value="REGISTER"><input type="reset">
<h1><a href=Login.html>Sign in Here</a></h1>
</form>
</body>
</html>
```

Output:-

New User Registration Page

Enter User Name

Enter Password

Re-Enter Password

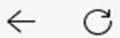
Enter Email

Enter Country Name

[Sign in Here](#)

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/userpass","root","root");
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!!!!");
}
}
catch(Exception e){out.println(e);}
}
else
{
out.println("<h1>Password Mismatch</h1>");
}
<jsp:include page="Registration.html"></jsp:include>
<%
}
</body> </html>
```



localhost:8084/practical4/Registration.jsp?txtName=Nandeshwar.soni&txtPass1=12345&txtPass2=

Registration JSP Page

Registration Successful

NANDESHWAR SUBHASH SONI
TYIT-13

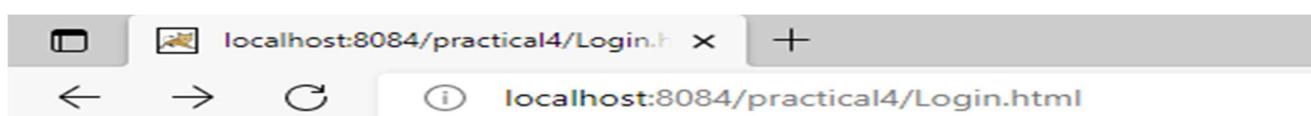
Login.html

```
<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="reset" ><input type="submit" value="~~~LOGIN~~~" >
</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");
try{
Class.forName("com.mysql.jdbc.Driver");
Connection con = DriverManager.getConnection("jdbc:mysql://localhost:3306/userpass","root","root");
PreparedStatement stmt = con.prepareStatement("select password from userpass where name=?");
stmt.setString(1, uname);
ResultSet rs = stmt.executeQuery();
if(rs.next()){
if(pass.equals(rs.getString(1))){
{
out.println("<h1>~~~ LOGIN SUCCESSFULL ~~~ </h1>");
}
}
else{
out.println("<h1>User Name not exist !!!!</h1>");
%>
<jsp:include page="Registration.jsp" ></jsp:include>
<%
}
}catch(Exception e){out.println(e);}
%>
</body></html>
```

Output:-

**Login Page**

Enter User Name	<input type="text" value="Nannu"/>
Enter Password	<input type="password" value="123"/>
Reset	<input type="button" value="~~~LOGIN~~~"/>

User details stored in database successfully: -

```
mysql> select * from userpass;
+-----+-----+-----+-----+
| name | password | email | country |
+-----+-----+-----+-----+
| Nannu | 123      | Nannu@gmail.com | INDIA   |
| pratam | 12345    | prat@gmail.com | INDIA   |
| Nandeshwar.soni | 12345 | nannu@gmail.com | USA     |
+-----+-----+-----+-----+
3 rows in set (0.04 sec)
```

Login Done



Registration JSP Page

~~~ LOGIN SUCCESSFULLL ~~~

Login failed :-



## Registration JSP Page

User Name not exist !!!!!

```
org.apache.jasper.JasperException: An exception occurred processing JSP page Registration.jsp at line 10
7: String pass2=request.getParameter("txtPass2");
8: String email=request.getParameter("txtEmail");
9: String ctry=request.getParameter("txtCon");
10: if(pass1.equals(pass2)) {
11:   try {
12:     Stacktrace:
```

**Practical no.5**

- A) 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.

**Update.jsp**

```
<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","root");
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 succesfully !!!!</h1>");
}
else{
out.println("<h1>Employee Record not exist !!!!</h1>"); }
}catch(Exception e){out.println(e);}
%>
</body> </html>
```

**Output:-**

```
mysql> select * from emp;
+-----+-----+
| empno | Salary |
+-----+-----+
|      1 | 10000  |
+-----+-----+
1 row in set (0.04 sec)
```

Updating records of emp:-

A screenshot of a web browser window. The address bar shows "localhost:8084/prac5a/Update.jsp". The page contains a form with two input fields: "Enter Employee Number" with value "01" and "Enter Salary to update" with value "25000". Below the inputs are two buttons: "Reset" and "Submit".

A screenshot of a web browser window. The address bar shows "localhost:8084/prac5a/updateemp" and the URL "localhost:8084/prac5a/updateemp.jsp?txtEno=01&txtSal=25000".

## Updating Employee Record

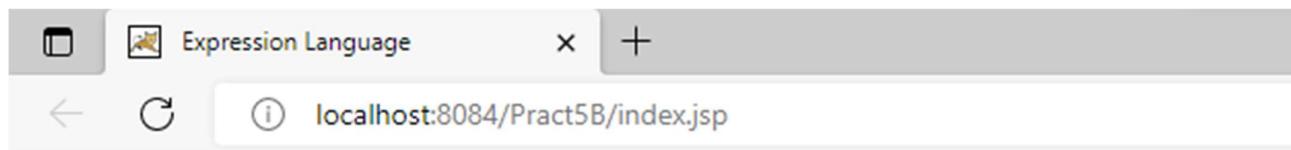
**Employee 10000 Exist**

**Employee Record updated successfully !!!!**

```
mysql> select * from emp;
+-----+-----+
| empno | Salary |
+-----+-----+
|      1 | 25000  |
+-----+-----+
1 row in set (0.00 sec)
```

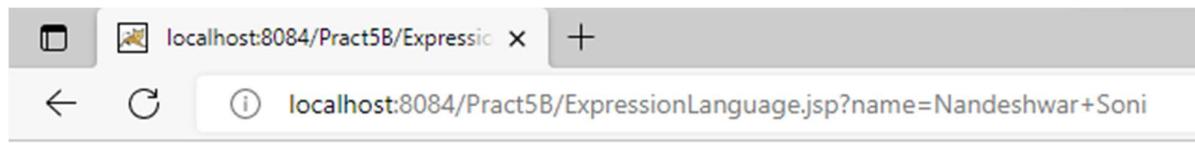
**5 B) Create a JSP page to demonstrate the use of Expression language****Index.jsp**

```
<html>
<head><title>Expression Language</title>
</head>
<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>
</html>
```

**Output: -**

welcome to index page

Enter Name:



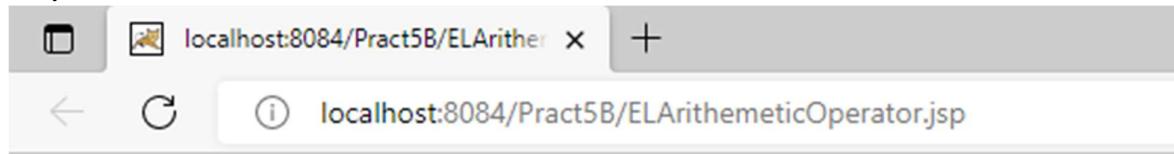
Welcome, Nandeshwar Soni Session Value is Admin Cookie name is , mycookie

**C. ExpressionLanguage.jsp**

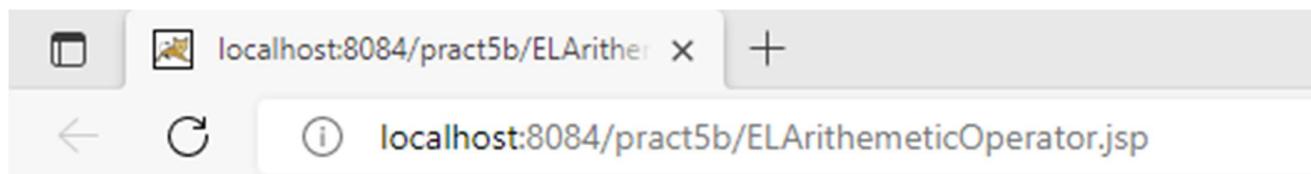
```
<body>
Welcome, ${ param.name }
Session Value is ${ sessionScope.user }
Cookie name is , ${cookie.name.value}
</body>
```

**D. 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>
```

**Output: -****E. ELArithemeticOperator.jsp**

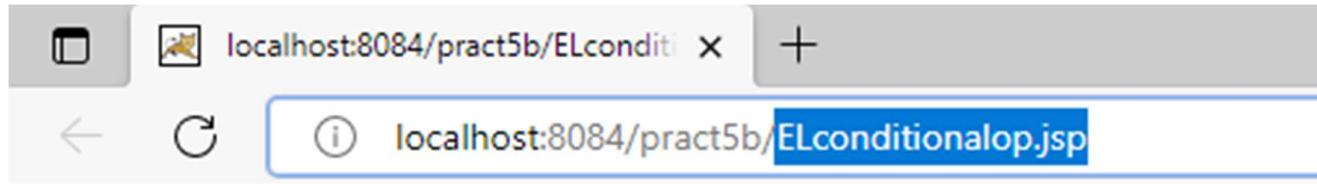
```
<body>
<%-- LogicalOperator --%>
<h2>Logical Operator</h2>
true and true: ${true and true}<br>
true && false: ${true && false}<br>
true or true: ${true or true}<br>
true || false: ${true || false}<br>
not true: ${not true}<br>
!false: ${!false}
</ body>
```



**F. ELconditionalop.jsp**

```
<body>
<h2>Conditional Operator</h2>
The result of 10>2 is: "${(10>1)?'greater':'lesser'}"
</body>
```

**Output:-**



## Conditional Operator

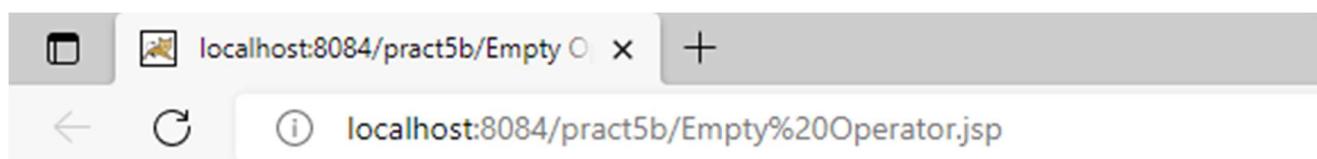
The result of 10>2 is: "greater"

**G. Empty Operator**

```
<H1>Empty Operator Example</H1>
```

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

**Output:-**



## Empty Operator Example

The Value for the Empty operator is:: false

**5c.** Create a JSP application to demonstrate the use of JSTL.

```
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
<%-- Set page title--%>
<%@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>
```

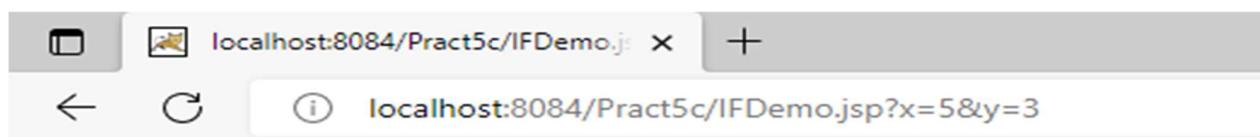
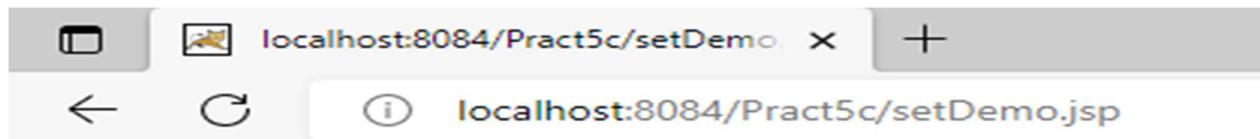
```
outDemo.jsp
<%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<c:set var="name" value="John"/>
My name is: <c:out value= "${name}" />
```

```
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" scope="session" 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>
```

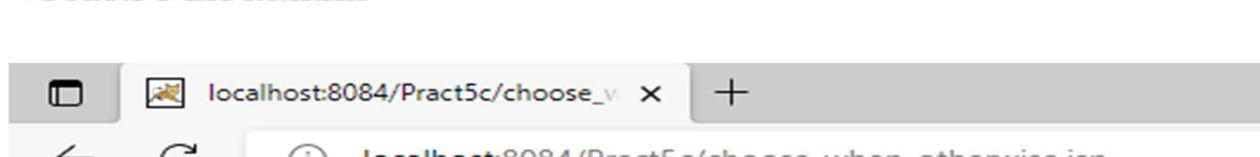
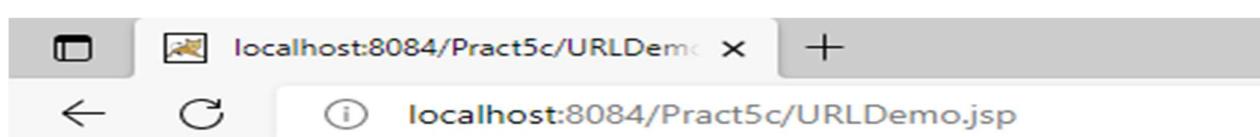
**Output: -**

[setDemo](#) [MaxIF](#) [ForEachDemo](#) [OutDemo](#) [URLDemo](#) [choose\\_when\\_otherwise](#)



### The Ans is:

5 is greater than 3



**Practical no: 6**

**6A) Create a “WelcomeBean” stateless session bean. Which accepts name from user. Display that name in uppercase with welcome message. Also give the link for index.jsp page**

**Index.jsp**

```
<%@page contentType="text/html" pageEncoding="UTF-8"%>
<!DOCTYPE html>
<html>
    <head>
        <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
        <title>WELCOME TO EJB</title>
    </head>
    <body bgcolor="navyblue"><center>
        <hr><p>FIRST EJB WEB APPLICATION</p>
        <form method="post" action="WelcomeServlet">
            <table align="center" width="100%" border="1" cellspacing="6" cellpadding="4">
                <tr><td>enter your name <input type="text" name="name" value="" size="10" tabindex="1"/>
                </td></tr>
                <tr><td><input type="submit" name="cmdSubmit" value="Submit" alt="Convert" tabindex="4"/></td></tr>
            </table>
        </form></center>
    </body>
</html>
```

**Welcomebean.java**

```
package ejb;
import javax.ejb.Stateless;
import javax.ejb.LocalBean;

@Stateless
@LocalBean
public class WelcomeBean {
    public String WelcomeBean(String user)
    {
        return "Hello" + """+user.toUpperCase()+ """+ "Welcome to the world of EJB ";
    }
}
```

**WelcomeServlet.java**

```
package ejb;

import java.io.*;
import javax.ejb.EJB;
import javax.servlet.*;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;

@WebServlet(name = "WelcomeServlet", urlPatterns = {" /WelcomeServlet"})
public class WelcomeServlet extends HttpServlet {
    @EJB
    WelcomeBean converterBean;

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html;charset=UTF-8");
        PrintWriter out = response.getWriter();
        try {
            WelcomeBean test = new WelcomeBean();
            out.println("<html>");
            out.println("<head>");
            out.println("<title>Welcome EJB</title>");
            out.println("</head>");
            out.println("<body bgcolor=navyblue><center>");
            out.println(test.WelcomeBean(request.getParameter("name")));
            out.println("<br/> click <a href='Index.jsp'>here </a>to go back ");
            out.println("</center></body>");
            out.println("</html>");
        } finally {
            out.close();
        }
    }
}
```

**Web.xml**

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app version="3.1" xmlns="http://xmlns.jcp.org/xml/ns/javaee"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd">
    <servlet><servlet-name>WelcomeServlet</servlet-name>
    <servlet-class>ejb.WelcomeServlet</servlet-class>
    </servlet>
    <servlet-mapping> <servlet-name>WelcomeServlet</servlet-name> <url-pattern>/WelcomeServlet</url-
    pattern></servlet-mapping> <session-config><session-timeout>30 </session-timeout>
    </session-config>
</web-app>
```

Output: -

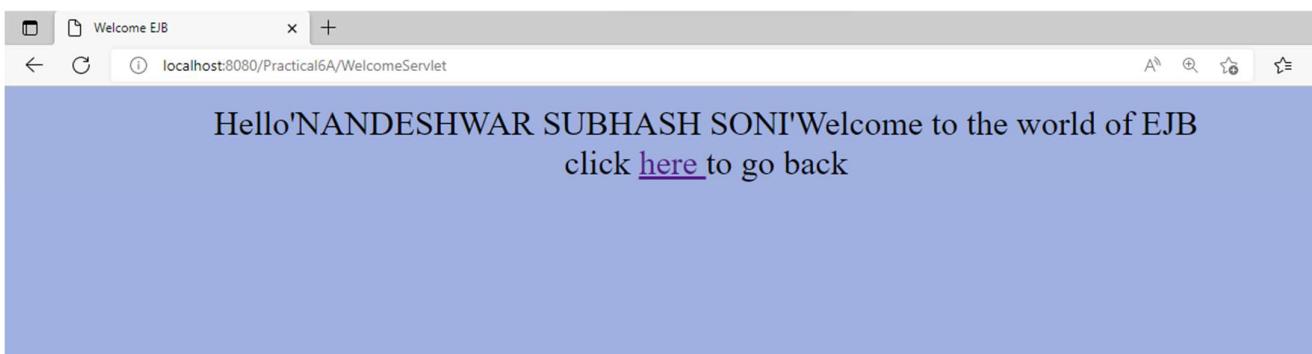
WELCOME TO EJB

localhost:8080/Practical6A/Index.jsp

FIRST EJB WEB APPLICATION

enter your name

Submit



WELCOME TO EJB

localhost:8080/Practical6A/Index.jsp

FIRST EJB WEB APPLICATION

enter your name

Submit

**6B) AIM:** Develop “Converter” Stateless Session Bean. Write Enterprise application for converting Dollar currency to Indian currency. converter consists of an enterprise bean, which performs the calculations. Use following formula: 1 Dollar = 83.01. Develop a web client to test the converter.

**Index.jsp**

```
<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>
```

**CCBean.java**

```
package mybeans;

import javax.ejb.Stateless;

@Stateless
public class CCBean {
public CCBean(){}
public double r2Dollar(double r){ return r/83.01; }
public double d2Rupees(double d){ return d*83.01; }
}
```

**CCServlet.java**

```
package mypack;
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import javax.ejb.EJB;
import mybeans.CCBean;
public class CCServlet extends HttpServlet {
@EJB CCBean obj;
@Override
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:-**

A screenshot of a web browser window titled "Currency Converter". The URL in the address bar is "localhost:8080/Practical6B/index.html". The page contains a form with the following fields:

- Enter Amount:
- Select Conversion Type:  Rupees to Dollar  Dollar to Rupees
- Reset

A screenshot of a web browser window titled "localhost:8080/Practical6B/CCServlet". The URL in the address bar is "localhost:8080/Practical6B/CCServlet?amt=100&type=r2d". The page displays the result of the conversion:

**100.0 Rupees = 1.2046741356463075 Dollars**

A screenshot of a web browser window titled "Currency Converter". The URL in the address bar is "localhost:8080/Practical6B/index.html". The page contains a form with the following fields:

- Enter Amount:
- Select Conversion Type:  Rupees to Dollar  Dollar to Rupees
- Reset

A screenshot of a web browser window titled "localhost:8080/Practical6B/CCServlet". The URL in the address bar is "localhost:8080/Practical6B/CCServlet?amt=100&type=d2r". The page displays the result of the conversion:

**100.0 Dollars = 8301.0 Rupees**