Laboratory Work

Subject: Java Technologies

Branch: B.Tech. (CE)

Semester: IV

Batch: A1

Student Roll No: CE012

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Lab9

**Topics: JSP, Servlet, Session Management in web application**

1. Write a Java web application using **HttpSession** which allows only logged in users to access the other JSPs/Servlets of the application. Write the following components:
2. **Login.html** allows users to provide username and password and send them as request parameters toLoginVerifierServlet.
3. **LoginVerifierServlet** takes username and password from login.html and verifies it. If credentials are correct then it creates a session. It displays welcome message along with username and links to first.jsp and second.jsp.
4. **first.jsp** and **second.jsp** display some text with username and can be accessed if the user is logged in. ( you should delegate to Login.html if the user is not logged in)

CODE:-

Login.html

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<form action=*"LoginVerifierServlet"* method=*'post'*>

<label for=*"username"*>username</label>

<input type=*"text"* name=*"username"* id=*"username"*>

<br>

<br>

<label for=*"password"*>password</label>

<input type=*"password"* name=*"password"* id=*"password"*>

<br>

<br>

<input type=*"submit"*>

</form>

</body>

</html>

LoginVerifierServlet.java

import jakarta.servlet.RequestDispatcher;

import jakarta.servlet.ServletException;

import jakarta.servlet.annotation.WebServlet;

import jakarta.servlet.http.HttpServlet;

import jakarta.servlet.http.HttpServletRequest;

import jakarta.servlet.http.HttpServletResponse;

import jakarta.servlet.http.HttpSession;

import java.io.IOException;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.SQLException;

/\*\*

\* Servlet implementation class LoginVerifierServlet

\*/

public class LoginVerifierServlet extends HttpServlet {

private static final long serialVersionUID = 1L;

/\*\*

\* @see HttpServlet#HttpServlet()

\*/

public LoginVerifierServlet() {

super();

// TODO Auto-generated constructor stub

}

/\*\*

\* @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)

\*/

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

// TODO Auto-generated method stub

response.sendRedirect("login.html");

}

/\*\*

\* @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)

\*/

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

// TODO Auto-generated method stub

response.setContentType("text/html");

String username=request.getParameter("username");

String password=request.getParameter("password");

try {

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

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/lab6","root","");

String query="SELECT \* FROM student WHERE username=? AND password=?";

PreparedStatement s=con.prepareStatement(query);

s.setString(1, username);

s.setString(2, password);

ResultSet r=s.executeQuery();

if(r.next()) {

HttpSession session=request.getSession();

session.setAttribute("username", username);

response.getWriter().println("<a href='first.jsp'>first jsp</a>");

response.getWriter().println("<a href='second.jsp'>second jsp</a>");

}

else {

response.getWriter().println("cradantial is invalid !");

RequestDispatcher d=request.getRequestDispatcher("login.html");

d.include(request, response);

}

} catch (SQLException e) {

// TODO Auto-generated catch block

System.out.println(e);

e.printStackTrace();

} catch (ClassNotFoundException e) {

System.out.println(e);

// TODO Auto-generated catch block

e.printStackTrace();

}

}

}

first.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<% **if**(session.getAttribute("username")==**null**) response.sendRedirect("login.html");%>

<h1>Welcome , <%= session.getAttribute("username") %> </h1>

<p>inside in first.jsp</p>

</body>

</html>

second.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<% **if**(session.getAttribute("username")==**null**) response.sendRedirect("login.html");%>

<h1>Welcome , <%= session.getAttribute("username") %> </h1>

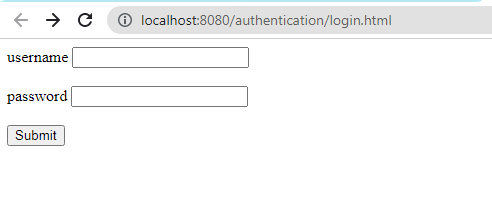
<p>inside in second.jsp</p>

</body>

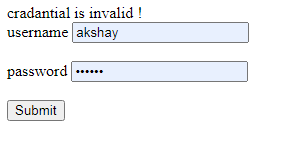
</html>

OUTPUT:-

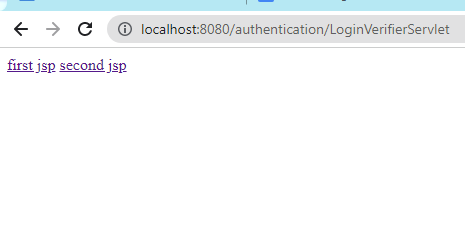
Login.html output



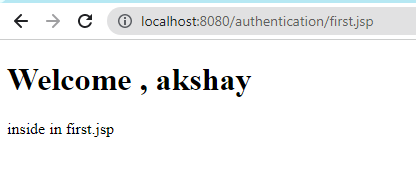
If cradential is invalid



If user is logged in



If we click on first jsp



Second jsp



first.jsp without logged in

it will redirect to login.html

1. Write a web based java application containing a JSP which performs the simple arithmetic calculation. Take the necessary operands and operators in textboxes. Write your JSP code using **jsp:useBean** action tag.

CalcBean.java

**package** authentication;

**public** **class** CalcBean {

**int** num1;

**int** num2;

**char** op;

**int** result;

**public** **int** getNum1() {

**return** num1;

}

**public** **void** setNum1(**int** num1) {

**this**.num1 = num1;

}

**public** **int** getNum2() {

**return** num2;

}

**public** **void** setNum2(**int** num2) {

**this**.num2 = num2;

}

**public** **char** getOp() {

**return** op;

}

**public** **void** setOp(**char** op) {

**this**.op = op;

}

**public** **int** getResult() {

**if**(getOp()=='+') {

setResult(getNum1()+getNum2());

}

**else** **if**(getOp()=='-') {

setResult(getNum1()-getNum2());

}

**else** **if**(getOp()=='\*') {

setResult(getNum1()\*getNum2());

}

**else**{

setResult(getNum1()/getNum2());

}

**return** result;

}

**public** **void** setResult(**int** result) {

**this**.result = result;

}

@Override

**public** String toString() {

**return** "CalcBean [num1=" + num1 + ", num2=" + num2 + ", op=" + op + ", result=" + result + "]";

}

}

Teaster.jsp

<%@ page language=*"java"* contentType=*"text/html; charset=UTF-8"*

pageEncoding=*"UTF-8"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"UTF-8"*>

<title>Insert title here</title>

</head>

<body>

<form>

<input type=*"number"* name=*"n1"* value=*'*<%= request.getParameter("n1") %>*'*>

<br>

<br>

<select name=*"op"* >

<option value=*'+'* <% **if**("+".equals(request.getParameter("op"))) { %>selected<% } %> >+</option>

<option value=*'-'* <% **if**("-".equals(request.getParameter("op"))) { %>selected<% } %>>-</option>

<option value=*'\*'* <% **if**("\*".equals(request.getParameter("op"))) { %>selected<% } %>>\*</option>

<option value=*'/'* <% **if**("/".equals(request.getParameter("op"))) { %>selected<% } %>>/</option>

</select>

<br>

<br>

<input type=*"number"* name=*"n2"* value=*'*<%= request.getParameter("n2") %>*'*>

<br>

<br>

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

<br>

<br>

</form>

<% **if**(request.getParameter("op")!=**null**){ %>

<jsp:useBean id=*"c"* class=*"authentication.CalcBean"* scope=*"request"*></jsp:useBean>

<jsp:setProperty property=*"num1"* name=*"c"* param=*"n1"* />

<jsp:setProperty property=*"num2"* name=*"c"* param=*"n2"* />

<jsp:setProperty property=*"op"* name=*"c"* param=*"op"* />

<h1>Result :- <jsp:getProperty property=*"result"* name=*"c"*/> </h1>

<% } %>

</body>

</html>

OUTPUT:-

