Experiment -8

Student Name: Akriti UID:22BCS14027
Branch: BE-CSE Section: EPAM-801 B

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in Java with Lab

1.Aim: To develop a servlet that accepts user credentials from an HTML form and displays a personalized welcome message on successful login.

Objective: Learn form handling with Servlets Understand HTTP request/response handling Practice doPost() method

Code:

```
<!DOCTYPE html>
<html>
<head><title>Login</title></head>
<body>
 <form action="LoginServlet" method="post">
  Username: <input type="text" name="username"><br>
  Password: <input type="password" name="password"><br>
  <input type="submit" value="Login">
 </form>
</body>
</html>
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
public class LoginServlet extends HttpServlet {
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
       throws ServletException, IOException {
    String user = request.getParameter("username");
    String pass = request.getParameter("password");
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    if ("admin".equals(user) && "1234".equals(pass)) {
```

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```
Discover. Learn. Empower.
        out.println("<h2>Welcome, " + user + "!</h2>");
      } else {
        out.println("<h2>Login Failed. Invalid credentials.</h2>");
   }
 }
 <web-app>
  <servlet>
   <servlet-name>LoginServlet</servlet-name>
   <servlet-class>LoginServlet</servlet-class>
  </servlet>
  <servlet-mapping>
   <servlet-name>LoginServlet/servlet-name>
   <url-pattern>/LoginServlet</url-pattern>
  </servlet-mapping>
 </web-app>
```

Output:

- 1) On correct login: Welcome, Akriti!
- 2) On failure: Login Failed. Invalid credentials.

2. Aim: To build a servlet integrated with JDBC that displays all employees and enables search by employee ID.

Objective: 1) Use JDBC with Servlet

- 2) Fetch and display records
- 3) Implement search functionality

Code:

```
<!DOCTYPE html>
<html>
<head><title>Search Employee</title></head>
<body>
 <form action="EmployeeServlet" method="post">
  Enter Employee ID: <input type="text" name="empId">
  <input type="submit" value="Search">
 </form>
</body>
</html>
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class EmployeeServlet extends HttpServlet {
  protected void doPost(HttpServletRequest request, HttpServletResponse response)
       throws ServletException, IOException {
    String empId = request.getParameter("empId");
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    try {
       Class.forName("com.mysql.jdbc.Driver");
       Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/company", "root", "password");
       String query = "SELECT * FROM employees WHERE emp_id=?";
       PreparedStatement ps = con.prepareStatement(query);
```

```
ps.setString(1, empId);
ResultSet rs = ps.executeQuery();

if (rs.next()) {
    out.println("<h2>Employee Details</h2>");
    out.println("ID: " + rs.getInt(1) + "<br>");
    out.println("Name: " + rs.getString(2) + "<br">br>");
    out.println("Department: " + rs.getString(3));
} else {
    out.println("No employee found with ID " + empId);
}

con.close();
} catch (Exception e) {
    out.println("Error: " + e.getMessage());
}
```

Output:

- 1) Enter an employee ID \rightarrow Shows details if found.
- 2) Not found \rightarrow "No employee found with ID X

3. Aim: To develop a JSP-based student portal that accepts attendance data and saves it to the database using a servlet.

Objective: 1) Combine JSP for UI and Servlets for logic

- 2) Perform INSERT using JDBC
- 3) Build a real-world web flow

Code:

```
<%@ page language="java" %>
<html>
<head><title>Student Attendance</title></head>
<body>
 <h2>Mark Attendance</h2>
 <form action="AttendanceServlet" method="post"> Roll
  No: <input type="text" name="roll"><br> Name:
  <input type="text" name="name"><br>> Status: <select</pre>
  name="status">
    <option>Present
    <option>Absent
  </select><br>
  <input type="submit" value="Submit">
 </form>
</body>
</html>
import java.io.*; import
javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;
public class AttendanceServlet extends HttpServlet {
  protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
       ServletException, IOException {
    String roll = request.getParameter("roll"); String
    name = request.getParameter("name"); String status
    = request.getParameter("status");
    response.setContentType("text/html");
```

```
PrintWriter out = response.getWriter();
    try {
       Class.forName("com.mysql.jdbc.Driver");
       Connection con =
DriverManager.getConnection("jdbc:mysql://localhost:3306/student_portal", "root",
"password");
       String query = "INSERT INTO attendance (roll_no, name, status) VALUES (?, ?,
?)";
       PreparedStatement ps = con.prepareStatement(query); ps.setString(1,
       roll);
       ps.setString(2, name);
       ps.setString(3, status);
       int i = ps.executeUpdate(); if
       (i > 0) {
         out.println("<h3>Attendance marked successfully for " + name + "!</h3>");
       }
       con.close();
     } catch (Exception e) {
       out.println("Error: " + e.getMessage());
  }
}
CREATE TABLE attendance (
  id INT AUTO_INCREMENT PRIMARY KEY,
  roll_no VARCHAR(20),
  name VARCHAR(100),
  status VARCHAR(10)
);
      OUTPUT
```

Form submission \rightarrow "Attendance marked successfully for John!" And the data is stored in the database.