Experiment -8

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Subject Name: Project-Based Learning in Java with Lab **Subject Code: 22CSH-359**

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

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

7.1.3 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)) {
```

```
            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, Sarthak!
2) On failure: Login Failed. Invalid credentials.

7.2.1 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

7.2.2 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>");
                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());
        }
    }
}
```

7.2.3 Output:

1) Enter an employee ID → Shows details if found.

2) Not found → "No employee found with ID X

7.3.1 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 name="status">
       <option>Present</option>
       <option>Absent</option>
    </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 → "Attendance marked successfully for John!"

And the data is stored in the database.