Experiment -8

Student Name: Akshat Srivastava
UID:22BCS11740
Branch: BE-CSE
Section/Group:22BCS_IOT_618A
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1.1. Aim: To develop a servlet that accepts user credentials from an HTML form and displays a personalized welcome message on successful login.

1.2 Objective:

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

1.3Code:

HTML Form (login.html)

```
<!DOCTYPE html>
<html>
<head><title>Login Page</title></head>
<body>
  <h2>Login Form</h2>
  <form action="LoginServlet" method="post">
    Username: <input type="text" name="username" /><br><br>
    Password: <input type="password" name="password" /><br><br>
    <input type="submit" value="Login" />
  </form>
</body>
</html>
```

Servlet Code (LoginServlet.java)

```
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 {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();

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

    if ("admin".equals(username) && "admin123".equals(password)) {
      out.println("<h2>Welcome, " + username + "!</h2>");
    } else {
      out.println("<h2>Login Failed. Invalid credentials.</h2>");
    }
  }
}
```

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web.xml Configuration

```
<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>
```

1.4 Output:

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

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

2.2 Objective:

- Use JDBC with Servlet
- Fetch and display records
- Implement search functionality

2.3 Code:

HTML Form (search.html)

```
<!DOCTYPE html>
<html>
<head><title>Search Employee</title></head>
<body>
  <h2>Search Employee by ID</h2>
  <form action="EmployeeServlet" method="post">
    Enter ID: <input type="text" name="empId" />
    <input type="submit" value="Search" />
  </form>
</body>
</html>
```

Servlet Code (EmployeeServlet.java)

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

public class EmployeeServlet extends HttpServlet {
  public void doPost(HttpServletRequest request, HttpServletResponse response)
      throws ServletException, IOException {

    response.setContentType("text/html");
    PrintWriter out = response.getWriter();
    String idStr = request.getParameter("empId");

    try {
      Class.forName("com.mysql.cj.jdbc.Driver");
      Connection con = DriverManager.getConnection(
        "jdbc:mysql://localhost:3306/company", "root", "yourpassword");

      Statement stmt = con.createStatement();
      ResultSet rs;

      if (idStr != null && !idStr.isEmpty()) {
        rs = stmt.executeQuery("SELECT * FROM employee WHERE id=" + idStr);
        if (rs.next()) {
          out.println("<h3>Employee Found:</h3>");
          out.println("ID: " + rs.getInt("id") + "<br>");
          out.println("Name: " + rs.getString("name") + "<br>");
          out.println("Email: " + rs.getString("email"));
        } else {
          out.println("<h3>No employee found with ID: " + idStr + "</h3>");
        }
      } else {
        rs = stmt.executeQuery("SELECT * FROM employee");
        out.println("<h3>All Employees:</h3>");
        while (rs.next()) {
```

```
            out.println("ID: " + rs.getInt("id") + ", ");
            out.println("Name: " + rs.getString("name") + ", ");
            out.println("Email: " + rs.getString("email") + "<br><br>");
          }
        }
        con.close();
      } catch (Exception e) {
        out.println("Error: " + e.getMessage());
      }
    }
}
```

---

web.xml Configuration

```
<web-app>
  <servlet>
    <servlet-name>EmployeeServlet</servlet-name>
    <servlet-class>EmployeeServlet</servlet-class>
  </servlet>

  <servlet-mapping>
    <servlet-name>EmployeeServlet</servlet-name>
    <url-pattern>/EmployeeServlet</url-pattern>
  </servlet-mapping>
</web-app>
```

2.4 Output:

Enter an employee ID → Shows details if found.

Not found → "No employee found with ID X

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

3.2 Objective:

- Combine JSP for UI and Servlets for logic
- Perform INSERT using JDBC
- Build a real-world web flow

3.3 Code:

```
<!DOCTYPE html>
<html>
<head>
   <title>Student Attendance</title>
</head>
<body>
   <h2>Enter Attendance Details</h2>
   <form action="AttendanceServlet" method="post">
      Student ID: <input type="text" name="id" /><br/>
      Name: <input type="text" name="name" /><br/>
      Date: <input type="date" name="date" /><br/>
      Status:
      <select name="status">
         <option value="Present">Present</option>
         <option value="Absent">Absent</option>
      </select><br/><br/>
      <input type="submit" value="Submit Attendance" />
   </form>
</body>
</html>
```

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

public class AttendanceServlet extends HttpServlet {
   public void doPost(HttpServletRequest req, HttpServletResponse res)
      throws ServletException, IOException {

      res.setContentType("text/html");
      PrintWriter out = res.getWriter();

      String id = req.getParameter("id");
      String name = req.getParameter("name");
      String date = req.getParameter("date");
      String status = req.getParameter("status");

      try {
         Class.forName("com.mysql.cj.jdbc.Driver");
         Connection con = DriverManager.getConnection(
            "jdbc:mysql://localhost:3306/student_db", "root", "yourpassword");

         PreparedStatement ps = con.prepareStatement(
            "INSERT INTO attendance (id, name, date, status) VALUES (?, ?, ?, ?)");
         ps.setString(1, id);
         ps.setString(2, name);
         ps.setString(3, date);
         ps.setString(4, status);

         int i = ps.executeUpdate();
         if (i > 0) {
            out.println("<h3>Attendance Recorded Successfully</h3>");
         } else {
            out.println("<h3>Failed to Record Attendance</h3>");
         }

         con.close();
```

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

```
<web-app>
    <servlet>
        <servlet-name>AttendanceServlet</servlet-name>
        <servlet-class>AttendanceServlet</servlet-class>
    </servlet>

    <servlet-mapping>
        <servlet-name>AttendanceServlet</servlet-name>
        <url-pattern>/AttendanceServlet</url-pattern>
    </servlet-mapping>
</web-app>
```

```
CREATE DATABASE student_db;
USE student_db;

CREATE TABLE attendance (
    id INT,
    name VARCHAR(100),
    date DATE,
    status VARCHAR(10)
);
```

3.4 OUTPUT

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