

Experiment 8

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Branch: CSE

Section/Group: 22BCS_IOT-642/B

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Date: 28-03-25

Subject: Java

Subject Code: 22CSH-359

1. Aim: Aim: To create a servlet that accepts user credentials through an HTML form and displays a personalized welcome message if the login is successful.

2. Objective: Implement a Java Servlet to handle user authentication and display a response.

3. Code:

login.html (Frontend Form)

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

// LoginServlet.java (Backend Servlet)

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
```

```
@WebServlet("/LoginServlet")
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) && "1234".equals(password)) {
            out.println("<h2>Welcome, " + username + "!</h2>");
        } else {
            out.println("<h2>Invalid Credentials. Please try again.</h2>");
        }
    }
}
```

4. Output:

```
Username: admin
Password: 1234
```

```
<h2>welcome, admin!</h2>
```

//MEDIUM LEVEL

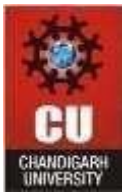
1. Aim: Create a servlet integrated with JDBC to display a list of employees and fetch employee details by ID.

2. Objective: Use JDBC to retrieve and display data from a MySQL database.

3. Code:

```
// search_employee.html
```

```
<!DOCTYPE html>
<html>
<head>
    <title>Search Employee</title>
</head>
```



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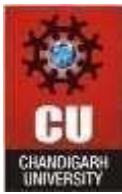
```
<body>
  <form action="EmployeeServlet" method="post">
    Enter Employee ID: <input type="text" name="empId" required>
    <input type="submit" value="Search">
  </form>
</body>
</html>
```

```
// EmployeeServlet.java
```

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/EmployeeServlet")
public class EmployeeServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();
        String empId = request.getParameter("empId");

        try {
            Class.forName("com.mysql.cj.jdbc.Driver");
            Connection con =
            DriverManager.getConnection("jdbc:mysql://localhost:3306/company", "root",
            "password");
            PreparedStatement ps = con.prepareStatement("SELECT * FROM employees
            WHERE id = ?");
            ps.setInt(1, Integer.parseInt(empId));
            ResultSet rs = ps.executeQuery();
```



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```
        if (rs.next()) {
            out.println("<h2>Employee Details</h2>");
            out.println("<p>ID: " + rs.getInt("id") + "</p>");
            out.println("<p>Name: " + rs.getString("name") + "</p>");
            out.println("<p>Department: " + rs.getString("department") + "</p>");
        } else {
            out.println("<h2>No Employee Found with ID: " + empId + "</h2>");
        }
        con.close();
    } catch (Exception e) {
        out.println("Error: " + e.getMessage());
    }
}
```

4. Output:

ID	Name	Department
101	John Doe	IT
102	Alice Smith	HR

```
Enter Employee ID: 101
```

```
<h2>Employee Details</h2>
<p>ID: 101</p>
<p>Name: John Doe</p>
<p>Department: IT</p>
```

//HARD LEVEL

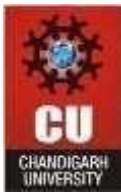
1. Aim: Develop a JSP-based student portal to record attendance.

2. Objective: Use JSP and Servlets to insert attendance records into a database.

3. Code:

```
// attendance.jsp
```

```
<!DOCTYPE html>
<html>
```



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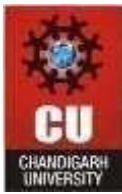
```
<head>
  <title>Student Attendance</title>
</head>
<body>
  <form action="AttendanceServlet" method="post">
    Student ID: <input type="text" name="studentId" required><br>
    Date: <input type="date" name="date" required><br>
    Status: <select name="status">
      <option value="Present">Present</option>
      <option value="Absent">Absent</option>
    </select><br>
    <input type="submit" value="Submit">
  </form>
</body>
</html>
```

```
// AttendanceServlet.java
```

```
import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/AttendanceServlet")
public class AttendanceServlet extends HttpServlet {
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter out = response.getWriter();

        String studentId = request.getParameter("studentId");
        String date = request.getParameter("date");
        String status = request.getParameter("status");
```



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```
try {  
    Class.forName("com.mysql.cj.jdbc.Driver");  
    Connection con =  
DriverManager.getConnection("jdbc:mysql://localhost:3306/school", "root",  
"password");  
    PreparedStatement ps = con.prepareStatement("INSERT INTO attendance  
(student_id, date, status) VALUES (?, ?, ?)");  
    ps.setString(1, studentId);  
    ps.setString(2, date);  
    ps.setString(3, status);  
    ps.executeUpdate();  
    out.println("Attendance recorded successfully!");  
    con.close();  
} catch (Exception e) {  
    out.println("Error: " + e.getMessage());  
}  
}
```

4. Output:

```
Student ID: 20231001  
Date: 2025-03-28  
Status: Present
```

Student ID	Date	Status
20231001	2025-03-28	Present