Experiment 8

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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;
```

```java
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/ht
        ml");      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

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

```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;
```

```java
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/ht
    ml");     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();
        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()); }
    }
}
```
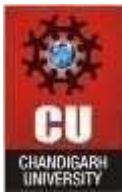
4. Output:

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

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

```html
        </select><br>
        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

```java
// 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/ht
    ml");    PrintWriter    out    =
    response.getWriter();

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