



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment - 8

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Subject Code: 23CSH-304

1. Aim:

Create a servlet integrated with JDBC to display a list of employees from a database and provide a search option by Employee ID.

2. Objective:

Demonstrate integration of database operations with servlet handling using JDBC.

3. Apparatus / Input Used:

- Servlet
- JDBC
- MySQL Database
- HTML Search Form
- Web Container (Tomcat)

4. Procedure:

- Create a MySQL table named Employee (EmpID, Name, Department)
- Create an HTML form to take EmpID input and submit to servlet
- In the servlet, override doGet() or doPost()
- Establish database connection using JDBC
- If EmpID is entered, retrieve specific employee details
- If EmpID is empty, display the full employee table
- Display data in HTML table format using PrintWriter
- Handle exceptions and close ResultSet, Statement, and Connection properly

5. Program Code:

HTML Form:

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

Servlet Code (EmployeeServlet.java):

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

public class EmployeeServlet extends HttpServlet {
    public void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException,
    IOException {
        res.setContentType("text/html");
        PrintWriter out = res.getWriter();
        String empid = req.getParameter("empid");

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

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

            if (empid != null && !empid.isEmpty()) {
                rs = st.executeQuery("SELECT * FROM Employee WHERE EmpID=" + empid);
            } else {
                rs = st.executeQuery("SELECT * FROM Employee");
            }

            out.println("<h2>Employee List:</h2>");
            out.println("<table border='1'><tr><th>ID</th><th>Name</th><th>Dept</th></tr>");

            while (rs.next()) {
```

```
        out.println("<tr><td>" + rs.getInt(1) + "</td><td>" + rs.getString(2) + "</td><td>" +
rs.getString(3) + "</td></tr>");
    }

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

Sample Output:

Employee List:

ID: 101 | Name: Alice | Department: HR

ID: 102 | Name: Bob | Department: IT