



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment - 8

Student Name: Sanampreet Singh

UID: 23BCS13053

Branch: BE-CSE

Section/Group: KRG-2B

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Subject Name: Project Based Learning in Java

Subject Code: 23CSH-304

Aim:

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

Objective:

Demonstrate integration of database operations with servlet handling using JDBC.

Apparatus / Input Used:

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

Procedure:

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

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><th><td>101</td><td>Alice</td><td>HR</td></tr><tr><td>102</td><td>Bob</td><td>IT</td></tr></table>");

        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