



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment - 8

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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 EmplID=" + 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><br>");

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