

Directory.jsp

```
<html>

<head>

    <title>Telephone Directory</title>

</head>

<body>

    <h1>Telephone Directory</h1>

    <form method="post" action="DirectoryServlet">

        <label for="searchType">Search by:</label>

        <select id="searchType" name="searchType">

            <option value="phone">Phone Number</option>

            <option value="name">Name</option>

        </select>

        <br><br>

        <label for="searchTerm">Search term:</label>

        <input type="text" id="searchTerm" name="searchTerm">

        <br><br>

        <input type="submit" value="Search">

    </form>

    <br><br>

    <h2>Add a new entry:</h2>

    <form method="post" action="DirectoryServlet">

        <label for="phoneNumber">Phone Number:</label>

        <input type="text" id="phoneNumber" name="phoneNumber">

        <br><br>

        <label for="name">Name:</label>

        <input type="text" id="name" name="name">

        <br><br>

        <label for="address">Address:</label>

        <input type="text" id="address" name="address">

        <br><br>
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        <label for="company">Company:</label>
        <input type="text" id="company" name="company">
        <br><br>
        <label for="pinCode">Pin Code:</label>
        <input type="text" id="pinCode" name="pinCode">
        <br><br>
        <input type="submit" value="Add Entry">
    </form>
</body>
</html>

```

DirectoryServlet.java

```

import java.io.IOException;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.ArrayList;
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("/DirectoryServlet")
public class DirectoryServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    private Connection getConnection() throws SQLException {
        String url = "jdbc:mysql://localhost:3306/your_database_name";
        String username = "your_mysql_username";

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        String password = "your_mysql_password";
        return DriverManager.getConnection(url, username, password);
    }

```

```

private void closeConnection(Connection conn, PreparedStatement stmt, ResultSet rs) {
    try {
        if (rs != null) rs.close();
        if (stmt != null) stmt.close();
        if (conn != null) conn.close();
    } catch (SQLException e) {
        e.printStackTrace();
    }
}

```

```

protected void doPost(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

```

```

    String searchType = request.getParameter("searchType");
    String searchTerm = request.getParameter("searchTerm");
    String phoneNumber = request.getParameter("phoneNumber");
    String name = request.getParameter("name");
    String address = request.getParameter("address");
    String company = request.getParameter("company");
    String pinCode = request.getParameter("pinCode");

```

```

    if (searchType != null && searchTerm != null) {
        ArrayList<Entry> results = new ArrayList<>();
        Connection conn = null;
        PreparedStatement stmt = null;
        ResultSet rs = null;
        try {
            conn = getConnection();

```

Output:

Searching for phone number "1234567890":

Directory Search

Search by:

['1234567890'] Phone Number

[] Name

[Search]

Add New Entry

Phone Number: []

Name: []

Address: []

Company: []

Pin Code: []

[Add]

Search Results

Phone Number	Name	Address	Company	Pin Code
-----	-----	-----	-----	-----
1234567890	John Doe	123 Main St	ACME Inc.	12345
1234567890	Jane Smith	456 Oak Ave	XYZ Company	67890

Searching for name "Doe":

Directory Search

Search by:

[] Phone Number

['Doe'] Name

[Search]

Add New Entry

Phone Number: []

Name: []

Address: []

Company: []

Pin Code: []

[Add]

Search Results

Phone Number	Name	Address	Company	Pin Code
-----	-----	-----	-----	-----
1234567890	John Doe	123 Main St	ACME Inc.	12345
5551234567	Joe Doeman	789 Pine St	Doeman Corp.	67890