



**SCTR's PUNE INSTITUTE OF COMPUTER TECHNOLOGY PUNE - 411043**

**Department of Electronics & Telecommunication Engineering (E&TCE)**

**ASSESSMENT YEAR: 2024-2025**

**CLASS: TE**

**BATCH:- N7**

**SUBJECT: Advanced JAVA Programming**

**Assignment No: 10**

**Roll No: 32402**

**Date: 02/04/2025**

**Programmer Name: Sahil Amrutkar**

**Batch: N7**

**Problem Statement:**

Create a simple calculator application using servlet.

**Code:**

**index.html:**

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Calculator</title>

    <link rel="stylesheet" href="styles.css">

</head>

<body>

    <div class="container">

        <h2>Simple Calculator</h2>

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

            <input type="number" name="num1" placeholder="Enter first number" required>

            <input type="number" name="num2" placeholder="Enter second number" required>

            <select name="operation">

                <option value="add">Addition (+)</option>

                <option value="subtract">Subtraction (-)</option>

                <option value="multiply">Multiplication (×)</option>

                <option value="divide">Division (÷)</option>

            </select>

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

        </form>

    </div>

</body>

</html>
```



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</select>

<button type="submit">Calculate</button>

</form>

</div>

</body>

</html>

**styles.css:**

body {

font-family: Arial, sans-serif;

background-color: #f5f5f5;

text-align: center;

}

.container {

width: 90%;

max-width: 400px;

margin: 100px auto;

padding: 20px;

background: white;

border-radius: 8px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

h2 {

margin-bottom: 20px;

}

input,



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select,

button {

width: 100%;

margin: 10px 0;

padding: 10px;

}

button {

background: blue;

color: white;

border: none;

cursor: pointer;

}

button:hover {

background: darkblue;

}

**CalculatorServlet.java:**

package com.calculator;

import java.io.IOException;

import java.io.PrintWriter;

import jakarta.servlet.ServletException;

import jakarta.servlet.http.\*;

public class CalculatorServlet extends HttpServlet {

private static final long serialVersionUID = 1L;



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```
protected void doPost(HttpServletRequest request, HttpServletResponse response)
```

```
    throws ServletException, IOException {
```

```
    response.setContentType("text/html");
```

```
    PrintWriter out = response.getWriter();
```

```
    // Getting input values
```

```
    double num1 = Double.parseDouble(request.getParameter("num1"));
```

```
    double num2 = Double.parseDouble(request.getParameter("num2"));
```

```
    String operation = request.getParameter("operation");
```

```
    double result = 0;
```

```
    // Performing operation
```

```
    switch (operation) {
```

```
        case "add": result = num1 + num2; break;
```

```
        case "subtract": result = num1 - num2; break;
```

```
        case "multiply": result = num1 * num2; break;
```

```
        case "divide":
```

```
            if (num2 != 0) {
```

```
                result = num1 / num2;
```

```
            } else {
```

```
                out.println("<h3 style='color:red;'>Error: Division by zero is not allowed!</h3>");
```

```
                return;
```

```
            }
```

```
            break;
```

```
    }
```

```
    // Sending response back
```



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```
out.println("<html><head><title>Result</title></head><body>");  
  
out.println("<h2>Calculation Result:</h2>");  
  
out.println("<h3>" + num1 + " " + getOperator(operation) + " " + num2 + " = " + result + "</h3>");  
  
out.println("<a href='index.html'>Go Back</a>");  
  
out.println("</body></html>");
```

```
}
```

```
private String getOperator(String operation) {
```

```
    switch (operation) {
```

```
        case "add": return "+";
```

```
        case "subtract": return "-";
```

```
        case "multiply": return "×";
```

```
        case "divide": return "÷";
```

```
        default: return "";
```

```
    }
```

```
}
```

```
}
```

**web.xml:**

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
```

```
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
    xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
```

```
    http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
```

```
    version="4.0">
```

```
<servlet>
```

```
    <servlet-name>CalculatorServlet</servlet-name>
```

```
    <servlet-class>com.calculator.CalculatorServlet</servlet-class>
```

```
</servlet>
```



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```
<servlet-mapping>
```

```
<servlet-name>CalculatorServlet</servlet-name>
```

```
<url-pattern>/CalculatorServlet</url-pattern>
```

```
</servlet-mapping>
```

```
<display-name>CalculatorApp</display-name>
```

```
</web-app>
```

**Output:**

### Simple Calculator

Addition (+)

Calculate

### Simple Calculator

Division (+)

Calculate

←

↺

📄

localhost:8080/CalculatorApp/CalculatorServlet

**Calculation Result:**

**55.0 ÷ 11.0 = 5.0**

[Go Back](#)