



Experiment 3.3

Student Name: Kamal Ale Magar

UID: 21BCS10155

Branch: CSE

Section/Group: 616_B

Semester: 6th Sem

Date of Performance: 15/04/2024

Subject Name: PBLJ with Lab

Subject Code: 21CSH-319

1. AIM: Write a JSP application to demonstrate the expression tag by using mathematical operation. There are multiple checkboxes in the HTML page to perform different mathematical operations. By default, Addition is checked and it adds the given number in the text box. At the time of division operation when we enter any invalid data in the text box, it generates an error message from "error.jsp" page.

2. OBJECTIVE:

- To learn about the concept of Servlet in Java.
- To learn about Apache Server (Tomcat).

3. Algorithm:

- i Initiate the program and prompt the user to enter the first numerical value.
- ii Request the user to input a second numerical value.
- iii Ask the user to choose an arithmetic process: add, subtract, multiply, or divide.
- iv Calculate the outcome using the two provided numbers and the chosen arithmetic process.
- v Exhibit the outcome of the calculation to the user.
- vi In cases where a division by zero is attempted, display an error alert.
- vii Present the final result in the designated output area.

4. CODE:

```
<!DOCTYPE html>
<html>
<head>
  <title>Perform Calculations</title>
  <style>
    body {
      text-align: center;
```

```

        background: linear-gradient(90deg, rgba(2,0,36,1) 0%, rgba(9,9,121,1) 35%, rgba(255,0,0,0.5)
        100%); color: black;
    }
    .container { border: 4px
    solid #007bff; padding:
    40px; display: inline-
    block; text-align: left;
    background-color:
    #f4f4f4; font-weight:
    bold;
    }
    .result-container { border:
    2px solid #007bff;
    padding: 10px; display:
    none; margin-top: 10px;
    text-align: center;
    background-color:
    #f4f4f4;
    }
</style>
<script>
    function
    calculate() {
        var firstNumber =
        parseFloat(document.getElementById("firstNumber").value); var
        secondNumber =
        parseFloat(document.getElementById("secondNumber").value); var
        operation =
        document.querySelector('input[name="operation"]:checked').value; var
        result; switch (operation) {
            case "add": result = firstNumber +
                secondNumber; break;
            case "subtract":
                result = firstNumber - secondNumber;
                break;
            case "multiply":
                result = firstNumber * secondNumber;
                break;
            case "divide":
                result = secondNumber !== 0 ? firstNumber / secondNumber : "Error: Division by zero not
                allowed"; break; }
        document.getElementById("resultDisplay").textContent = "Result: " + result;
        document.getElementById("resultContainer").style.display = "block"; }
</script>
</head>
<body>
    <h2>Calculator</h2>
    <div class="container">
        <div>
            <input type="radio" name="operation" value="add" checked> Add
            <input type="radio" name="operation" value="subtract"> Subtract
            <input type="radio" name="operation" value="multiply"> Multiply
            <input type="radio" name="operation" value="divide"> Divide

```



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

```
</div>  
<!-- The rest of your form goes here -->  
</div>  
</body>  
</html>
```

5. OUTPUT:

Mathematical Operations

☐ Addition ☐ Subtraction ☒ Multiplication ☐ Division

Enter First Number:

Enter Second Number:

Result: 1000

Mathematical Operations

☐ Addition ☐ Subtraction ☐ Multiplication ☒ Division

Enter First Number:

Enter Second Number:

Result: Cannot divide by zero



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Discover. Learn. Empower.

6. Learning Outcomes:

- Learned how to use Apache Tomcat to run JSP applications.
- Design and implement a dynamic JSP calculator application.
- Deploy and test the JSP calculator on a web server optimizing performance.