## **Experiment 3.3**

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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 is multiple checkboxes in html page to perform different mathematical operations. By default, Addition is checked and it add the given number in text box. At the time of division operation when we enter any invalid data in text box, it generates error message from "error.jsp" page.

### 2. OBJECTIVE:

- To learn about 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:

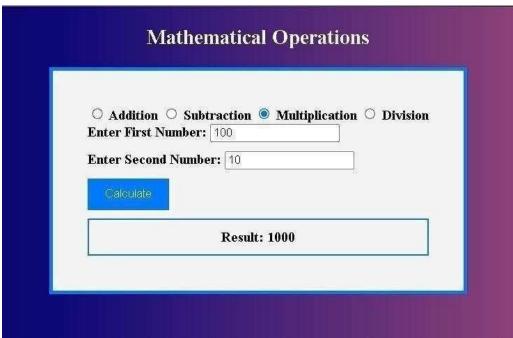
```
<!DOCTYPE html>
<html>
<head>
    <title>Perform Calculations</title>
    <tyle>
        body {
            text-align: center;
```

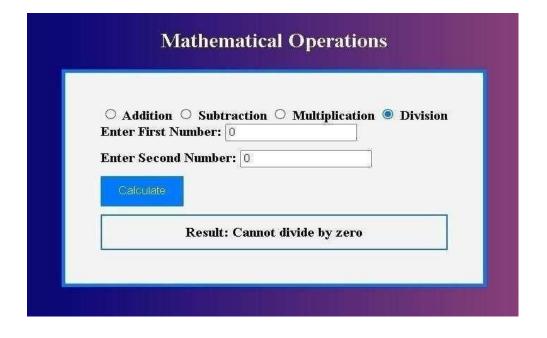
```
100%); color: black;
    .container { border: 4px
      solid #007bff; padding:
      40px; display: inline-
      block; text- align: left;
      background- color:
      #f4f4f4; font- weight:
      bold;
    .result-container { border:
      2px solid #007bff;
      padding: 10px; display:
      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
```

background: linear-gradient(90deg, rgba(2,0,36,1) 0%, rgba(9,9,121,1) 35%, rgba(255,0,0,0.5)

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

### 5. OUTPUT:







# 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.