

Experiment 3.2

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Subject Name: Project based learning in Java with Lab

Subject Code: 21CSH-319

1. Aim: Create JSP application for addition, multiplication and division.

2. Objective:

- To learn about Java Server Pages JSP.
- To learn about various JSP tags.

3. Input/Apparatus Used:

Hardware Requirements: - Computer or laptop

Software Requirements: - Eclipse, NetBeans, online compilers(Jsfiddle) for java.

4. Description:

JavaServer Pages (JSP) is a technology used in web development to create dynamic web pages. It allows embedding Java code within HTML to generate dynamic content. JSP tags provide functionality for tasks like database access, session management, and control flow. Core tags like ``<jsp:include>`` and ``<jsp:forward>`` handle page inclusion and redirection. Expression Language (EL) tags like ``${ }`` enable easy access to data stored in beans. JSP simplifies web development by combining the power of Java with the simplicity of HTML.

5. Code:

HTML Code:

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Calculator</title>
</head>
<body>
<h1>Simple Calculator</h1>
<form id="calculatorForm">
  <label for="num1">Number 1:</label>
  <input type="number" id="num1" name="num1"><br><br>

  <label for="num2">Number 2:</label>
  <input type="number" id="num2" name="num2"><br><br>
```

```
<input type="button" onclick="performOperation('Addition')" value="Addition">
<input type="button" onclick="performOperation('Multiplication')" value="Multiplication">
<input type="button" onclick="performOperation('Division')" value="Division">
</form>

<div id="result"></div>
</body>
</html>
```

Javascript Code:

```
function performOperation(operation) {
    var num1 = parseFloat(document.getElementById("num1").value);
    var num2 = parseFloat(document.getElementById("num2").value);

    var result;
    if (operation === 'add') {
        result = num1 + num2;
    } else if (operation === 'multiply') {
        result = num1 * num2;
    } else if (operation === 'divide') {
        if (num2 === 0) {
            result = "Error: Cannot divide by zero";
        } else {
            result = num1 / num2;
        }
    }

    document.getElementById("result").innerHTML = "<h2>" + operation.charAt(0).toUpperCase() +
    operation.slice(1) + " Result: " + result + "</h2>";
}
```

6. Output:

Simple Calculator

Number 1:

Number 2:

Multiply Result: 540

Simple Calculator

Number 1:

Number 2:

Divide Result: 3.75

7. Learning Outcomes:

- Implemented code creating a JSP application to perform maths operations.
- Understood about Java Server Pages JSP.