

## Program 1:

**Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.**

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Program_1-Simplae JS Calculator</title>
  <style type="text/css">
    table,
    td,
    th {
      border: 2px solid;
      text-align: center;
      background-color: skyblue;
      margin: auto;
    }
    input {
      text-align: center;
    }
  </style>
  <script type="text/javascript">
    function calc(clicked_id) {
      var v1 = parseFloat(document.getElementById("value1").value);
      var v2 = parseFloat(document.getElementById("value2").value);
      if (isNaN(v1) || isNaN(v2))
        alert("Please enter a valid number");
      else if (clicked_id == "add")
        document.getElementById("answer").value = v1 + v2;
      else if (clicked_id == "sub")
        document.getElementById("answer").value = v1 - v2;
      else if (clicked_id == "mul")
        document.getElementById("answer").value = v1 * v2;
      else if (clicked_id == "div") {
        if (v2 == 0) {
          alert("Please Enter a Non Zero Denominator");
          location.reload();
        }
        else
          document.getElementById("answer").value = v1 / v2;
      }
    }
    function cls() {
      value1.value = "0";
      value2.value = "0";
      answer.value = "";
    }
  </script>
</head>
<body>
```

```

<table>
  <tr>
    <th colspan="4"> Simple Calculator </th>
  </tr>
  <tr>
    <td>Enter Operand-1</td>
    <td><input type="text" id="value1" value="0" /></td>
    <td>Enter Operand-2</td>
    <td><input type="text" id="value2" value="0" /></td>
  </tr>
  <tr>
    <td><input type="button" value="Addition" id="add" onclick="calc(this.id)" /> </td>
    <td><input type="button" value="Substraction" id="sub" onclick="calc(this.id)" /> </td>
    <td><input type="button" value="Multiplication" id="mul" onclick="calc(this.id)" />
  </td>
    <td><input type="button" value="Division" id="div" onclick="calc(this.id)" /> </td>
  </tr>
  <tr>
    <td> Result: </td>
    <td><input type="text" id="answer" value="" disabled /></td>
    <td><input type="button" value="Clear All" id="cls" onclick="cls(this.id)" /> </td>
  </tr>
</table>
</body>
</html>

```

## Output:

Simple Calculator			
Enter Operand-1	0	Enter Operand-2	0
Addition	Substraction	Multiplication	Division
Result:		Clear All	

## Test Cases 1:

Simple Calculator			
Enter Operand-1	50.56	Enter Operand-2	24.39
Addition	Substraction	Multiplication	Division
Result:	74.95	Clear All	

Test Case 1 - Addition

Simple Calculator			
Enter Operand-1	50.56	Enter Operand-2	24.39
Addition	Substraction	Multiplication	Division
Result:	26.17	Clear All	

Test Case 1 - Subtraction

Simple Calculator			
Enter Operand-1	50.56	Enter Operand-2	24.39
Addition	Substraction	Multiplication	Division
Result:	1233.1584	Clear All	

Test Case 1 - Multiplication

Simple Calculator			
Enter Operand-1	50.56	Enter Operand-2	24.39
Addition	Substraction	Multiplication	Division
Result:	2.072980729807298	Clear All	

Test Case 1 - Division

## Test Case 2:

Simple Calculator			
Enter Operand-1	0	Enter Operand-2	45
Addition	Substraction	Multiplication	Division
Result:	45	Clear All	

Test Case 2 - Addition

Simple Calculator			
Enter Operand-1	0	Enter Operand-2	45
Addition	Substraction	Multiplication	Division
Result:	-45	Clear All	

Test Case 2 - Subtraction

Simple Calculator			
Enter Operand-1	0	Enter Operand-2	45
Addition	Substraction	Multiplication	Division
Result:	0	Clear All	

Test Case 2 – Multiplication & Division

## Test Case 3:

Simple Calculator			
Enter Operand-1	45	Enter Operand-2	0
Addition	Substraction	Multiplication	Division
Result:	45	Clear All	

Test Case 3 - Addition

Simple Calculator			
Enter Operand-1	45	Enter Operand-2	0
Addition	Substraction	Multiplication	Division
Result:	45	Clear All	

Test Case 3 - Subtraction

Simple Calculator			
Enter Operand-1	45	Enter Operand-2	0
Addition	Substraction	Multiplication	Division
Result:	0	Clear All	

Test Case 3 - Multiplication

Simple Calculator			
Enter Operand-1	127.0.0.1:5500	Enter Operand-2	5500
Addition	Substraction	Multiplication	Division
Result:		Clear All	

127.0.0.1:5500 says

Please Enter a Non Zero Denominator

OK

Test Case 3 - Division

## Test Case 4:

Simple Calculator			
Enter Operand-1	127.0.0.1:5500	Enter Operand-2	5500
Addition	Substraction	Multiplication	Division
Result:		Clear All	

127.0.0.1:5500 says

Please enter a valid number

OK

Test Case 4 – Addition, Subtraction, Multiplication & Division

## Test Case 5:

Simple Calculator			
Enter Operand-1	127.0.0.1:5500	Enter Operand-2	5500
Addition	Substraction	Multiplication	Division
Result:		Clear All	

127.0.0.1:5500 says

Please enter a valid number

OK

Test Case 5 - Addition, Subtraction, Multiplication & Division

## Program 1 Challenge:

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8" />
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>Experiment-1</title>
  <script>
    function insert(num) {
      document.getElementById('output').value =
        document.getElementById('output').value + num;
    }

    function equal() {
      var exp = document.getElementById('output').value;
      if (exp) {
        document.getElementById('output').value = eval(exp);
      }
    }

    function cls() {
      document.getElementById('output').value = "";
    }
  </script>
  <style>
    * {
      margin: 0;
      padding: 0;
      box-sizing: border-box;
    }

    input {
      text-align: center;
      width: 100%;
      padding: 12px;
      border: none;
      background-color: #6d6d6d;
      color: #fff;
      font-size: 1.2rem;
      font-weight: bold;
      border-radius: 3px;
    }

    input:hover {
      background-color: #818181;
      cursor: pointer;
    }
  </style>
</html>
```

```

    }

    h2 {
        margin-top: 2rem;
        font-size: 2rem;
        text-align: center;
    }

    body {
        background-color: #f7f7f7;
        overflow: hidden;
    }

    .main-wrapper {
        width: 20%;
        margin: 0 auto;
    }

    .grid-container {
        display: grid;
        margin: 3rem auto;
        grid-template-columns: repeat(4, 1fr);
        grid-template-rows: repeat(5, 1fr);
        grid-gap: 5px;
        background-color: white;
        padding: 5px;
        border: 3px solid grey;
        border-radius: .4rem;
    }

    #output {
        grid-column: 1/5;
        text-align: right;
        font-size: 2.5rem;
        font-weight: normal;
        padding: 10px 15px;
        background-color: #6d6d6d;
    }

    #output:hover {
        cursor: text;
        background-color: #6d6d6d;
    }
</style>
</head>

<body>
    <h2 class="main-heading">Simple Calculator Program</h2>
    <div class="main-wrapper">

```

```
<div class="grid-container">

  <input type="textview" id="output" onblur="this.focus()" autofocus>

  <input type="button" value="1" onclick="insert(1)">
  <input type="button" value="2" onclick="insert(2)">
  <input type="button" value="3" onclick="insert(3)">

  <input type="button" value="÷" onclick="insert('/')">

  <input type="button" value="4" onclick="insert(4)">
  <input type="button" value="5" onclick="insert(5)">
  <input type="button" value="6" onclick="insert(6)">

  <input type="button" value="x" onclick="insert('*)">

  <input type="button" value="7" onclick="insert(7)">
  <input type="button" value="8" onclick="insert(8)">
  <input type="button" value="9" onclick="insert(9)">

  <input type="button" value="—" onclick="insert('.')">

  <input type="button" value="Del" onclick="cls()">

  <input type="button" value="0" onclick="insert(0)">

  <input type="button" value="=" onclick="equal()">

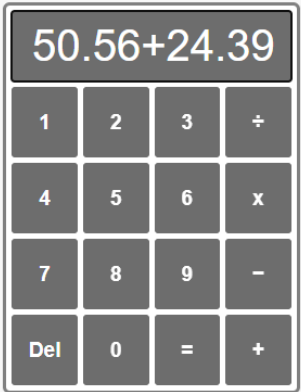
  <input type="button" value="+" onclick="insert('+)">
</div>
</div>
</body>

</html>
```



**Challenge Output:**

**Simple Calculator Program**



Output of Program 1 Challenge.