

Program-1: Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

Steps:

1. Open a new folder with “**your-name_program1**” (**vidya_program1**)
2. Open a text editor or sublime text-3 file and save it as **index.html**
3. Type the below code and save it.

```
<!DOCTYPE html>
<html>
<head>
  <title>Experiment-1</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();
        }
      }
    }
  </script>
</head>
<body>
  <table border="1">
    <tr>
      <td>Enter first number</td>
      <td>Enter second number</td>
    </tr>
    <tr>
      <td><input type="text" value="value1" id="value1" /></td>
      <td><input type="text" value="value2" id="value2" /></td>
    </tr>
    <tr>
      <td colspan="2"><input type="button" value="Add" id="add" /></td>
    </tr>
    <tr>
      <td colspan="2"><input type="button" value="Sub" id="sub" /></td>
    </tr>
    <tr>
      <td colspan="2"><input type="button" value="Mul" id="mul" /></td>
    </tr>
    <tr>
      <td colspan="2"><input type="button" value="Div" id="div" /></td>
    </tr>
    <tr>
      <td colspan="2"><input type="text" value="answer" id="answer" /></td>
    </tr>
  </table>
</body>
</html>
```

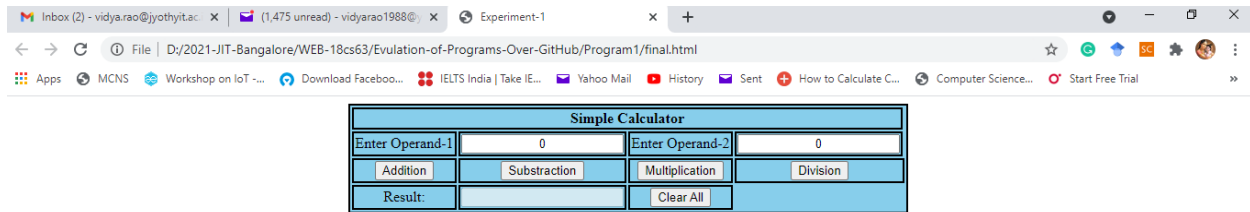
```

        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="Subtraction" id="Sub"
onclick="calc(this.id)"/> </td>
            <td><input type="button" value="Multiplication" id="mul"
onclick="calc(this.id)"/> </td>
            <td colspan="2"><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>

```

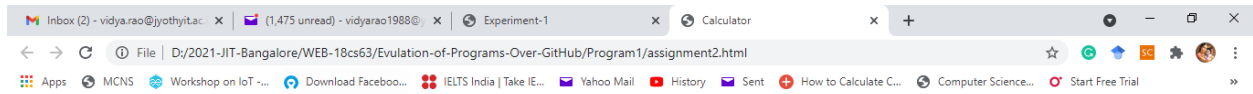
Output:



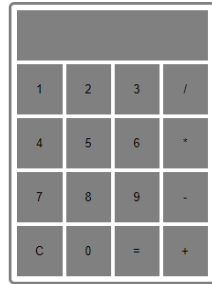
4. Test cases:

Test No.	Input Parameters	Expected Output	Obtained Output	Remarks
1.	value1=50.56 value2=24.39	Addition =74.95	Addition =74.95	PASS
		Subtraction =26.17	Subtraction =26.17	
		Multiplication=1233.1584	Multiplication=1233.1584	
		Division=2.072980729807298	Division=2.072980729807298	
2.	value1= 0 value2= 45	Addition =45	Addition =45	PASS
		Subtraction =-45	Subtraction =-45	
		Multiplication=0	Multiplication=0	
		Division=0	Division=0	
3.	value1= 45 value2= 0	Addition =45	Addition =45	PASS
		Subtraction =45	Subtraction =45	
		Multiplication=0	Multiplication=0	
		Division=Infinity	Division=Infinity	
4.	value1 = abc value2 = 23	ENTER VALID NUMBER	ENTER VALID NUMBER	PASS
5	value1 = 50 value2 =xyz	ENTER VALID NUMBER	ENTER VALID NUMBER	PASS

5. Your assignment should like below with various test cases. Where, embedded CSS files is used rather Inline CSS.



A SIMPLE CALCULATOR PROGRAM



6. Submission of assignment.
 - a. Save all your code and outputs under a word file and email-to : Google class.
 - b. Push all your files into your GitHub account as explained in the class.
 - c. Go through file attached **“GitHub-Tutorial-for-Saving-Programs.pdf”**. for further uploading steps. It will live demonstrated by next weekend.