**Assignment-1**

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

***Index.html***

<!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();

                    }

                    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 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>

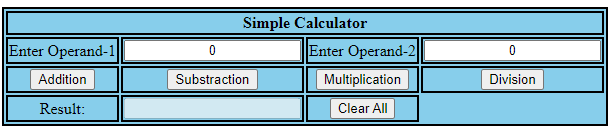
            </tr>

        </table>

    </body>

</html>

**Output:**

******

**Test cases:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | **Test** **No**. |  | | Input Parameters | Obtained  Output |
| 1. | value1=50.56  value2=24.39 | **Addition:**    **Subtraction:**    **Multiplication:**    **Division:** |
| 2. | value1= 0  value2= 45 | **Addition:**    **Subtraction:**    **Multiplication:**    **Division:** |
| 3. | value1= 45  value2= 0 | **Addition:**    **Subtraction:**    **Multiplication:**    **Division:** |
| 4. | value1 = abc  value2 = 23 | **Addition:**    **Subtraction:**    **Multiplication:**    **Division:** |
| 5. | value1 = 50  value2 =xyz | **Addition:**    **Subtraction:**    **Multiplication:**    **Division:** |

***challenge1.html***

<!DOCTYPE html>

<html>

<head>

    <title>Experiment-1</title>

    <style type="text/css">

        body{

                background-image: url(https://c4.wallpaperflare.com/wallpaper/890/539/769/mathematics-equations-science-3d-wallpaper-preview.jpg);

            }

        h1{

                text-align: center;

                color: #ffffff;

                text-shadow:3px 3px #37d4bf;

                font-size: 50px;

        }

        table {

            padding: 8px;

            border-radius: 20px;

            text-align: center;

            background-color: #37d4bf;

            margin: auto;

        }

        .button {

            width: 55px;

            height: 55px;

            background-color: #1d807c;

            border: none;

            text-decoration: none;

            border-radius: 20px;

            font-size: 20px;

            cursor: pointer;

            color: white;

            box-shadow: 2px 2px #014d4a;

        }

        .button:hover{

            background-color: #014d4a;

            box-shadow: 2px 2px #011817;

        }

        input {

            text-align: center;

        }

        #entry {

            background-color: #75bab1;

            width: 250px;

            height: 40px;

            border-radius: 20px;

            font-size: 20px;

            color: white;

            box-shadow: 2px 2px #014d4a;

        }

    </style>

    <script type="text/javascript">

        function calc(clicked\_id) {

            var v = parseFloat(document.getElementById("entry").value);

            if (clicked\_id == "one")

                document.getElementById("entry").value += 1;

            if (clicked\_id == "two")

                document.getElementById("entry").value += 2;

            if (clicked\_id == "three")

                document.getElementById("entry").value += 3;

            if (clicked\_id == "four")

                document.getElementById("entry").value += 4;

            if (clicked\_id == "five")

                document.getElementById("entry").value += 5;

            if (clicked\_id == "six")

                document.getElementById("entry").value += 6;

            if (clicked\_id == "seven")

                document.getElementById("entry").value += 7;

            if (clicked\_id == "eight")

                document.getElementById("entry").value += 8;

            if (clicked\_id == "nine")

                document.getElementById("entry").value += 9;

            if (clicked\_id == "zero")

                document.getElementById("entry").value += 0;

            if (clicked\_id == "dot") {

                    document.getElementById("entry").value +=".";

            }

            if (clicked\_id == "cls\_all")

            document.getElementById("entry").value = "";

            if(clicked\_id == "del")

            {

                let str = document.getElementById("entry").value;

                document.getElementById("entry").value = str.slice(0,-1);

            }

            if(clicked\_id == "add")

                document.getElementById("entry").value +="+";

            if(clicked\_id == "sub")

                document.getElementById("entry").value +="-";

            if(clicked\_id == "mul")

            document.getElementById("entry").value +="\*";

            if(clicked\_id == "div")

                document.getElementById("entry").value +="/";

            if(clicked\_id == "percentage")

                document.getElementById("entry").value +="%";

            if(clicked\_id == "equals")

                document.getElementById("entry").value = eval(document.getElementById("entry").value);

        }

    </script>

</head>

<body>

    <h1>Simple Calculator</h1>

    <table>

        <tr>

            <td colspan='4'><input type='text' id='entry' value='' disabled /></td>

        </tr>

        <tr>

            <td><input type='button' id='cls\_all' class='button' value='C' onclick='calc(this.id)' /></td>

            <td></td>

            <td><input type='button' id='percentage' class='button' value='%' onclick='calc(this.id)' /></td>

            <td><input type='button' id='del' class='button' value="Del" onclick='calc(this.id)' /></td>

        </tr>

        <tr>

            <td><input type='button' id='one' class='button' value='1' onclick='calc(this.id)' /></td>

            <td><input type='button' id='two' class='button' value='2' onclick='calc(this.id)' /></td>

            <td><input type='button' id='three' class='button' value='3' onclick='calc(this.id)' /></td>

            <td><input type='button' id='div' class='button' value='/' onclick='calc(this.id)' /></td>

        </tr>

        <tr>

            <td><input type='button' id='four' class='button' value='4' onclick='calc(this.id)' /></td>

            <td><input type='button' id='five' class='button' value='5' onclick='calc(this.id)' /></td>

            <td><input type='button' id='six' class='button' value='6' onclick='calc(this.id)' /></td>

            <td><input type='button' id='mul' class='button' value='\*' onclick='calc(this.id)' /></td>

        </tr>

        <tr>

            <td><input type='button' id='seven' class='button' value='7' onclick='calc(this.id)' /></td>

            <td><input type='button' id='eight' class='button' value='8' onclick='calc(this.id)' /></td>

            <td><input type='button' id='nine' class='button' value='9' onclick='calc(this.id)' /></td>

            <td><input type='button' id='sub' class='button' value='-' onclick='calc(this.id)' /></td>

        </tr>

        <tr>

            <td><input type='button' id='dot' class='button' value='.' onclick='calc(this.id)' /></td>

            <td><input type='button' id='zero' class='button' value='0' onclick='calc(this.id)' /></td>

            <td><input type='button' id='equals' class='button' value='=' onclick='calc(this.id)' /></td>

            <td><input type='button' id='add' class='button' value='+' onclick='calc(this.id)' /></td>

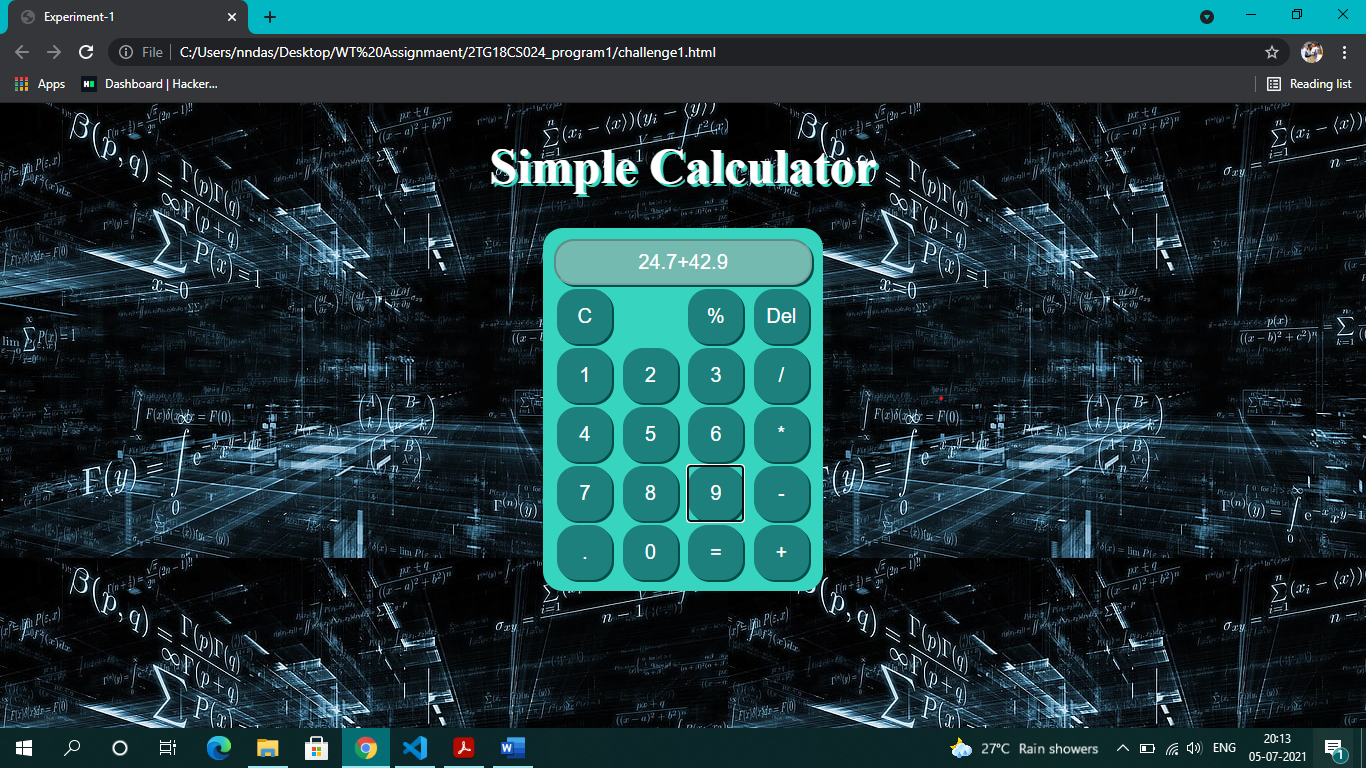
        </tr>

    </table>

</body>

</html>

**Output:**

****