

Internet And Web Programming

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20BCI0258

Lab Assignment – 2

index.html

```
<html lang='en'>

<head>

  <meta charset='UTF-8'>

  <meta name='viewport' content='width=device-width, initial-scale=1.0'>

  <meta http-equiv='X-UA-Compatible' content='ie=edge'>

  <title>Build a JavaScript Calculator</title>

  <link href="https://fonts.googleapis.com/css?family=Orbitron" rel="stylesheet">

  <link rel="stylesheet" href="backend.js" type="text/Javascript">

  <link rel="stylesheet" href="style.css" type="text/css">

</head>

<body>

  <div class="container">

    <h1 id="h1"> Calculator</h1>

    <input id="input" type="text" name="output" >

    <table>

      <tr>

        <td><button class="secondarybtn"></button></td>

        <td><button class="secondarybtn"></button></td>

        <td><button id="backbtn" class="secondarybtn">DEL</button></td>

        <td><button id="clrbtn" class="secondarybtn" onclick="defaultColor('white')">AC</button></td>

      </tr>

      <tr>

        <td><button class="secondarybtn">&#177</button></td>

        <td><button class="secondarybtn" onclick="decimalInputAlert()>.</button></td>

        <td><button class="secondarybtn">%</button></td>

        <td><button class="secondarybtn">&#8730</button></td>
```

```

</tr>

<tr>

  <td><button>7</button></td>

  <td><button>8</button></td>

  <td><button>9</button></td>

  <td><button class="secondarybtn" onclick="divAlert()">&#247</button></td>

</tr>

<tr>

  <td><button>4</button></td>

  <td><button>5</button></td>

  <td><button>6</button></td>

  <td><button class="secondarybtn" onclick="mulAlert()">&#215</button></td>

</tr>

<tr>

  <td><button>1</button></td>

  <td><button>2</button></td>

  <td><button>3</button></td>

  <td><button class="secondarybtn" onclick="subAlert()">-</button></td>

</tr>

<tr>

  <td><button>00</button></td>

  <td><button>0</button></td>

  <td><button id="equals" class="ansbtn" onclick="check();changeOutputColor('red')">=</button></td>

  <td><button class="secondarybtn" onclick="additionAlert()">+ </button></td>

</tr>

</table>

<p id="footer">Made by <a href="https://www.linkedin.com/in/akshat-pattiwar">Akshat Pattiwar</a> |
<a href="https://github.com/Akshatpattiwar512">Visit

  Github Repository</a> </p>

</div>

</body>

<script src="backend.js"></script>

</html>

```

style.css

```
.container {  
    text-align : center;  
    max-width: 100%;  
  
}
```

```
table{  
margin : auto;  
}
```

```
button{  
    width: 147px;  
    height: 64.5px;  
    margin: 3px;  
    border-radius: 5px;  
    border: 1px solid #f1f3f4;  
    background-color: #f1f3f4;  
    font-size: 25px;  
    cursor: pointer;  
  
}
```

```
button:active{  
    border : 2px solid #dce5e9;  
}
```

```
#input{  
    width: 594px;  
    height: 77px;  
    margin-bottom: 10px;  
    border-radius: 5px;
```

```
border: 1px solid #d4dce0;;  
font-size: 35px;  
padding: 0px 10px;  
text-align: right;  
}
```

```
.secondarybtn{  
    background-color:#dadce0;  
}
```

```
.ansbtn {  
  
    background-color: #4285f4;  
    font-weight: 700;  
    color: white;
```

```
}
```

```
#backbtn{  
  
    background-color: #dadce0;  
    text-decoration-color: #dadce0;  
}
```

```
@media screen and (max-width: 800px) {  
    button{  
        width: 15vw;  
        font-size: 4vw;  
  
    }
```

```
#input{  
    width: 61vw;
```

```
}  
  
#h1{  
  font-size: 6vw;  
}
```

```
div #footer{  
  font-size: 2vw;  
}  
}
```

```
div #footer{  
  margin-top: 50px;  
}
```

backend.js

```
let screen = document.getElementById('input');  
evalValue = "";  
screenData = "";  
screen.value = "0";  
buttons = document.querySelectorAll('button');  
for (item of buttons) {  
  item.addEventListener('click', function (e) {  
    buttonValue = e.target.innerText;  
  
    if (buttonValue == String.fromCharCode(215)) {  
      screenData += String.fromCharCode(215);  
      buttonValue = '*';  
      evalValue += buttonValue;  
      screen.value = screenData;  
    }  
  });  
}
```

```
}
```

```
else if (buttonValue == String.fromCharCode(247)) {
```

```
    screenData += String.fromCharCode(247);
```

```
    buttonValue = '/';
```

```
    evalValue += buttonValue;
```

```
    screen.value = screenData;
```

```
}
```

```
else if (buttonValue == "=") {
```

```
    length = evalValue.length;
```

```
    console.log(length);
```

```
    if (evalValue == "") {
```

```
    }
```

```
    else if((evalValue.charAt(evalValue.length-1) == "%")){
```

```
        console.log("before eval screendata " + screenData);
```

```
        console.log("before eval evalvalue " + evalValue);
```

```
        evalValue = evalValue.substring(0, length-1);
```

```
        screen.value = eval(evalValue)/100;
```

```
        evalValue = screen.value;
```

```
        screenData = screen.value;
```

```
        console.log("after eval screendata " + screenData);
```

```
        console.log("before eval evalvalue " + evalValue)
```

```
    }
```

```

else{

    console.log("before eval screendata " + screenData);

    console.log("before eval evalvalue " + evalValue);

    screen.value = eval(evalValue);

    evalValue = screen.value;

    screenData = screen.value;

    console.log("after eval screendata " + screenData);

    console.log("before eval evalvalue " + evalValue);

}

}

else if (buttonValue == "DEL") {

    if (screen.value == "0") {

    }

    else {

        size = screen.value.length;

        screen.value = screen.value.substring(0, size - 1);

        evalValue = evalValue.substring(0, size - 1);

        screenData = screen.value;

    }

}

else if (buttonValue == "AC") {

    screenData = "";

    screen.value = "0";

    evalValue = "";

}

else if (buttonValue == String.fromCharCode(8730)) {

```

```

        screenData += (String.fromCharCode(8730) + "(");

        buttonValue = 'Math.sqrt(';
        evalValue += buttonValue;
        screen.value = screenData;
    }

    else if (buttonValue == String.fromCharCode(177)) {
        console.log("clicked +-");

        if (evalValue == "0") {
        }

        else {

            screenData = -parseFloat(screenData);
            buttonValue = "";
            evalValue = -parseFloat(evalValue);
            screen.value = screenData;

        }

    }

    else {
        screenData += buttonValue;
        evalValue += buttonValue;
        screen.value = screenData;
    }
})
}

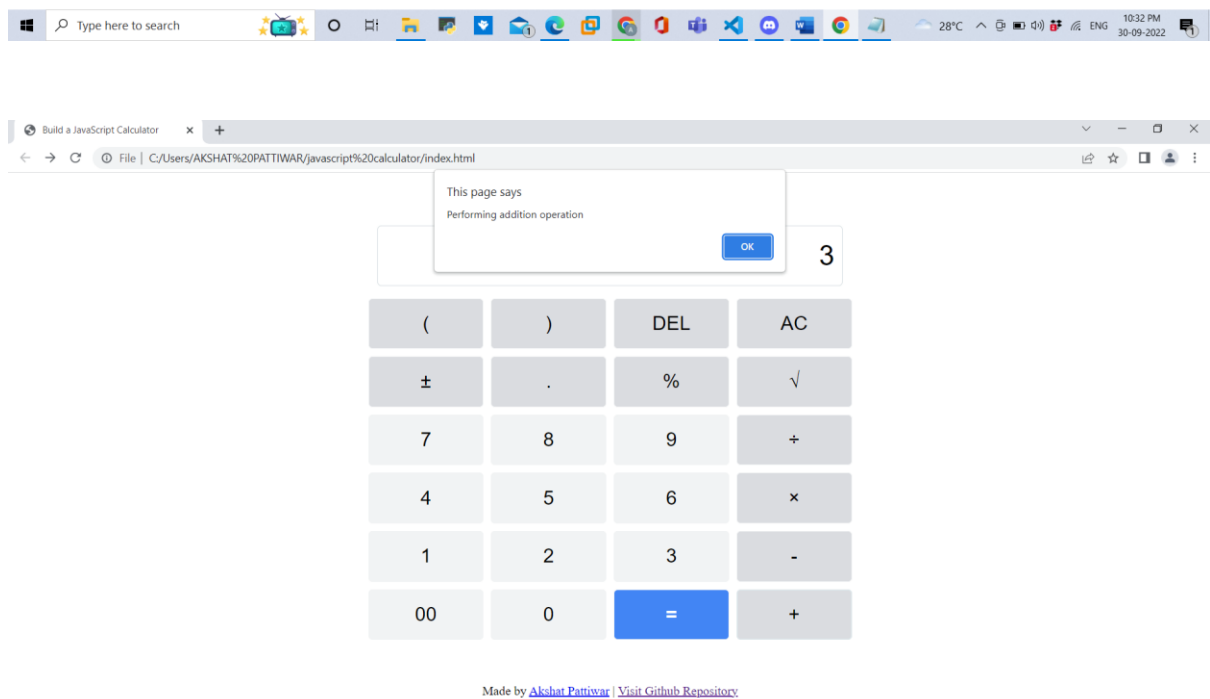
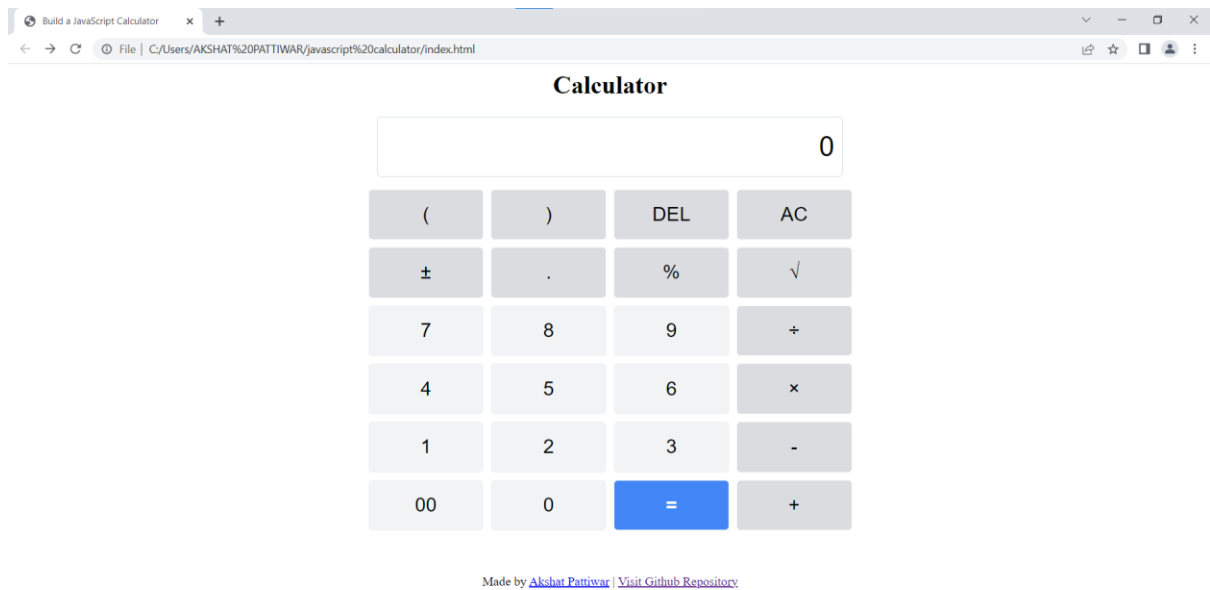
function additionAlert() {
    alert("Performing addition operation");
}

```



```
}  
  
function subAlert() {  
    alert("Performing subtraction operation");  
}  
  
function mulAlert() {  
    alert("Performing multiplication operation");  
}  
  
function divAlert() {  
    alert("Performing division operation");  
}  
  
function decimalInputAlert() {  
    alert("Input contains decimal values");  
}  
  
function changeOutputColor(color){  
    document.getElementById("input").style.background = color;  
}  
  
function defaultColor(color){  
    document.getElementById("input").style.background = color;  
}  
  
function check()  
{  
    var re = /^[+]?[0-9]+\.[0-9]+$/;  
    let found = screenData.match( re )?true:false  
    if(found==true)  
    {  
        window.alert("Output contains decimal value");  
    }  
    window.alert(found);  
}  
  
// window.alert(screen.value)  
  
console.log(buttons);
```

Output



Calculator

3+6

| | | | |
|----|---|-----|----|
| (|) | DEL | AC |
| ± | . | % | √ |
| 7 | 8 | 9 | ÷ |
| 4 | 5 | 6 | × |
| 1 | 2 | 3 | - |
| 00 | 0 | = | + |

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Calculator

9

| | | | |
|----|---|-----|----|
| (|) | DEL | AC |
| ± | . | % | √ |
| 7 | 8 | 9 | ÷ |
| 4 | 5 | 6 | × |
| 1 | 2 | 3 | - |
| 00 | 0 | = | + |

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