



Daffodil
International
University

Lab Task

Course Title : Web Engineering Lab

Course Code : CSE418

Submitted To :

Mushfiqur Rahman

Lecturer

Department of C.S.E

Daffodil International **University**

Submitted By :

Hrithik Mojumdar

ID : 181-15-1814

Section : PC- C

Department of C.S.E

Daffodil International **University**

Calculator Using html,css & js

Git Hub Link: <https://github.com/HrithikMojumdar/Calculator.git>

index Code:

```
<!doctype html>
<html lang="en">
<head>
  <title>Calculator Task</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <div class="calculator">
    <div class="top-container">
      </div>
      <div class="value">0</div>
      <div class="buttons-container">
        <div class="button function ac">AC</div>
        <div class="button function pm">±</div>
        <div class="button function percent">%</div>
        <div class="button operator division">÷</div>
        <div class="button number-7">7</div>
        <div class="button number-8">8</div>
        <div class="button number-9">9</div>
        <div class="button operator multiplication">×</div>
        <div class="button number-4">4</div>
        <div class="button number-5">5</div>
        <div class="button number-6">6</div>
        <div class="button operator subtraction">-</div>
        <div class="button number-1">1</div>
        <div class="button number-2">2</div>
        <div class="button number-3">3</div>
        <div class="button operator addition">+</div>
        <div class="button number-0">0</div>
        <div class="button decimal">.</div>
        <div class="button operator equal">=</div>
      </div>
    <div class="bottom"></div>
  </div>
  <script src="script.js"></script>
</body>
</html>
```

CSS Code:

```
body {  
  font-family: Arial ;  
  margin: 25px;  
}  
  
.calculator {  
  background: #BBDEFB;  
  border-radius: 50px;  
  color: white;  
  height: 1000px;  
  padding: 30px;  
  position: relative;  
  width: 500px;  
}  
  
.top-container {  
  display: flex;  
  height: 170px;  
  justify-content: space-between;  
  padding: 0 20px;  
}  
  
.value {  
  font-size: 130px;  
  font-weight: 300;  
  height: 158px;  
  margin-bottom: 20px;  
  margin-right: 20px;  
  text-align: right;  
}  
  
.buttons-container {  
  display: grid;  
  grid-gap: 20px;  
  grid-template-columns: repeat(4, 1fr);  
  grid-template-rows: repeat(9, 1fr);  
}
```

```
.button {  
  align-items: center;  
  background: #333;  
  border-radius: 50%;  
  cursor: pointer;  
  display: flex;  
  font-size: 45px;  
  height: 110px;  
  justify-content: center;  
  transition: filter .3s;  
  width: 105px;  
}
```

```
.button.function {  
  color: black;  
  background: #F57F17;  
}
```

```
.button.operator {  
  background: #00C853;  
}
```

```
.button:active,  
.button:focus {  
  filter: brightness(120%);  
}
```

JS Code:

// 181-15-1814 ~ Hrithik Mojumdar

// DOM Elements

```
const valueEl = document.querySelector('.value');
const acEl = document.querySelector('.ac');
const percentEl = document.querySelector('.percent');
const additionEl = document.querySelector('.addition');
const subtractionEl = document.querySelector('.subtraction');
const multiplicationEl =
document.querySelector('.multiplication');
const divisionEl = document.querySelector('.division');
const equalEl = document.querySelector('.equal');
const decimalEl = document.querySelector('.decimal');
const number0El = document.querySelector('.number-0');
const number1El = document.querySelector('.number-1');
const number2El = document.querySelector('.number-2');
const number3El = document.querySelector('.number-3');
const number4El = document.querySelector('.number-4');
const number5El = document.querySelector('.number-5');
const number6El = document.querySelector('.number-6');
const number7El = document.querySelector('.number-7');
const number8El = document.querySelector('.number-8');
const number9El = document.querySelector('.number-9');
const numberElArray = [
    number0El, number1El, number2El, number3El, number4El,
    number5El, number6El, number7El, number8El, number9El
];

// For variable
let valueStrInMemory = null;
let operatorInMemory = null;

// For Functions
const getValueAsStr = () => valueEl.textContent.split(',').join("");
const getValueAsNum = () => {
    return parseFloat(getValueAsStr());
};
```

```
const setStrAsValue = (valueStr) => {  
  if (valueStr[valueStr.length - 1] === '.') {  
    valueEl.textContent += '.';  
    return;  
  }  
}
```

```
const [wholeNumStr, decimalStr] = valueStr.split('.');  
if (decimalStr) {  
  valueEl.textContent =  
    parseFloat(wholeNumStr).toLocaleString() + '.' + decimalStr;  
} else {  
  valueEl.textContent = parseFloat(wholeNumStr).toLocaleString();  
}  
};
```

```
const handleNumberClick = (numStr) => {  
  const currentValueStr = getValueAsStr();  
  if (currentValueStr === '0') {  
    setStrAsValue(numStr);  
  } else {  
    setStrAsValue(currentValueStr + numStr);  
  }  
};
```

```
const getResultOfOperationAsStr = () => {  
  const currentValueNum = getValueAsNum();  
  const valueNumInMemory = parseFloat(valueStrInMemory);  
  let newValueNum;  
  if (operatorInMemory === 'addition') {  
    newValueNum = valueNumInMemory + currentValueNum;  
  } else if (operatorInMemory === 'subtraction') {  
    newValueNum = valueNumInMemory - currentValueNum;  
  } else if (operatorInMemory === 'multiplication') {  
    newValueNum = valueNumInMemory * currentValueNum;  
  } else if (operatorInMemory === 'division') {  
    newValueNum = valueNumInMemory / currentValueNum;  
  }  
  return newValueNum.toString();  
};
```

```

const handleOperatorClick = (operation) => {
  const currentValueStr = getValueAsStr();

  if (!valueStrInMemory) {
    valueStrInMemory = currentValueStr;
    operatorInMemory = operation;
    setStrAsValue('0');
    return;
  }
  valueStrInMemory = getResultOfOperationAsStr();
  operatorInMemory = operation;
  setStrAsValue('0');
};

```

```

acEl.addEventListener('click', () => {
  setStrAsValue('0');
  valueStrInMemory = null;
  operatorInMemory = null;
});

```

// For Oerators

```

additionEl.addEventListener('click', () => {
  handleOperatorClick('addition');
});
subtractionEl.addEventListener('click', () => {
  handleOperatorClick('subtraction');
});
multiplicationEl.addEventListener('click', () => {
  handleOperatorClick('multiplication');
});
divisionEl.addEventListener('click', () => {
  handleOperatorClick('division');
});
equalEl.addEventListener('click', () => {
  if (valueStrInMemory) {
    setStrAsValue(getResultOfOperationAsStr());
    valueStrInMemory = null;
    operatorInMemory = null;
  }
});

```

// For Nmbers and Decimal

```
for (let i=0; i < numberElArray.length; i++) {  
  const numberEl = numberElArray[i];  
  numberEl.addEventListener('click', () => {  
    handleNumberClick(i.toString());  
  });  
}  
decimalEl.addEventListener('click', () => {  
  const currentValueStr = getValueAsStr();  
  if (!currentValueStr.includes('.')) {  
    setStrAsValue(currentValueStr + '.');  
  }  
});
```

Git Hub Link:

<https://github.com/HrithikMojumdar/Calculator.git>

Output:



