# Tutorial Week 7 - Simple Calculator (JavaScript + Styling)

Build a simple calculator using buttons and JavaScript, then improve the layout using CSS.

File name: week7_calculator.html

### Step 1) Create the basic HTML structure:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title>Simple Calculator</title>
</head>

<body>

  <h1>Simple Calculator</h1>

  <p>Number 1: <input id="n1" type="text"></p>
  <p>Number 2: <input id="n2" type="text"></p>

  <p id="result">Result: </p>

</body>
</html>
```

### Step 2) Add four buttons under the inputs (before the Result paragraph):

```
<button onclick="add()">+</button>
<button onclick="subtract()">-</button>
<button onclick="multiply()">*</button>
<button onclick="divide()">/</button>
```

### Step 3) Add a <script> section before </body> and create the functions:

```
<script>
function getNum1() {
  return parseInt(document.getElementById("n1").value);
}

function getNum2() {
  return parseInt(document.getElementById("n2").value);
}

function showResult(value) {
  document.getElementById("result").textContent = "Result: " + value;
}

function add() {
  var result = getNum1() + getNum2();
  showResult(result);
}

function subtract() {
  var result = getNum1() - getNum2();
  showResult(result);
}

function multiply() {
  var result = getNum1() * getNum2();
  showResult(result);
}

function divide() {
  var result = getNum1() / getNum2();
  showResult(result);
}
</script>
```

### Step 4) Wrap all calculator content inside a container div with class='calc'.

```
<div class="calc">
  <!-- Move all calculator content inside this div -->
</div>
```

### Step 5) Add a <style> section inside <head>

Inside <head>, add a <style> block just before </head>. For now, leave it empty:

```
<style>

</style>
```

### Step 6) Style the body

Inside the <style> block, add this CSS. Then save and refresh:

Try changing the background-color to other colours and see what happens.

```
body{
  font-family: Arial, sans-serif;
  background-color: rosybrown;
  padding: 30px;
}
```

### Step 7) Style the calculator container (.calc)

Add this CSS under the body rule. Save and refresh to see the calculator box appear:

Try changing the .calc background-color to other colours.

```
.calc{
  width: 360px;
  background-color: rgb(230, 136, 183);
  border: 2px solid #333;
  border-radius: 12px;
  padding: 16px;
  margin: 0 auto;
}
```

**Step 8) Style the input fields**

Add this CSS under the .calc rule. Save and refresh:

```
.calc input{
  width: 100%;
  padding: 10px;
  margin-top: 6px;
  box-sizing: border-box;
}
```

**Step 9) Style the operator buttons**

Add this CSS under the input rule. Save and refresh:

Notice the background colour for the buttons. Try other colours too.

```
.calc button{
  background-color: rgb(133, 233, 237);
  width: 22%;
  padding: 10px;
  margin-top: 10px;
  margin-right: 2%;
  font-size: 40px;
  cursor: pointer;
  border-radius: 10px;  /* rounded corners */
  border: 1px solid #333;
}
```

**Step 10) Add a hover effect for buttons**

Add this CSS under the button rule. Save and refresh, then hover over the buttons:

```
.calc button:hover{
  background-color: #d4d0d0;
}
```

### Step 11) Style the result output

Add this CSS under the hover rule. Save and refresh:

```
#result{
  margin-top: 20px;
  font-weight: bold;
}
```