

# Simple Calculator Project Instructions

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## 1. index.html

Create the basic HTML structure for a simple calculator using the following specifications:

- The page must include the following HTML elements: `<html>`, `<head>`, `<title>`, `<link>`, `<body>`, `<div>`, `<button>`, `<script>`.
- Link the external CSS file: `style.css`.
- Link the external JavaScript file: `script.js`.
- Use a div with class "calculator" to contain all calculator elements.
- Inside it, create an `<input>` element with `id="display"` and `disabled` attribute.
- Below the input, create a grid of buttons inside a div with class "buttons". The layout should be:  
[7] [8] [9] [+]  
[4] [5] [6] [-]  
[1] [2] [3] [\*]  
[0] [C] [=] [/]
- Use onclick handlers to call JS functions like `appendNumber()`, `operator()`, `clearDisplay()`, and `calculateResult()`.

## 2. style.css

Add styles for the calculator layout:

- Reset all margins and paddings using universal selector (\*).
- Center the calculator using flexbox on the body element.
- Style the calculator div with background, rounded corners, padding, and shadow.
- Style the input to have full width, right-aligned text, padding, and a subtle background.
- Use grid layout for the ".buttons" container with 4 equal columns and gaps.
- Style the buttons with uniform size, rounded corners, and hover/active effects.

## 3. script.js

Implement the calculator logic in JavaScript using the following functions:

- Variables: `currentInput`, `currentOperator`, `firstOperand`, and a reference to the display element.
- `appendNumber(number)`: Append the digit to the input and update display.
- `operator(op)`: If `firstOperand` is null, assign `currentInput` to it and store the operator.

Otherwise, call `calculateResult()` and update operator.

- `calculateResult()`: Perform the arithmetic operation based on the `currentOperator`. Show result on display.
- `clearDisplay()`: Reset all variables and clear the display.
- Use `document.getElementById('display')` to access the input element.
- No need to export functions or attach them to window – define them globally so they work with inline onclick handlers.