# **CN5006 – ASSIGNMENT 1**

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**Explanation Of the Code:**

This React program is a simple calculator component built without using hooks. The calculator component oversees executing simple mathematical operations like addition, subtraction, multiplication, and division by extracting input values from HTML elements and performing the appropriate operations based on the user’s input.

When a user clicks the “Calculate” button, the calculate() function is called. The values of the first number (num1), second number (num2), and operator (operator) are obtained from the DOM using document.getElementById. These values are converted to floating-point numbers so that they can be handled as numerical data during the calculation. The function then utilizes a switch statement to determine the appropriate operator and performs the relevant arithmetic operation:

* The addition (+) operator adds the two values.
* Subtraction (-) subtracts the second integer from the first.
* The symbol (\*) represents multiplication of two numbers.
* Division (/) divides the first integer using the second integer while also looking for a zero in the second number to avoid division by zero, and if one is found it displays a custom error message.

**Program Execution:**

To run the application, I imported the calculator component into the index.js file and rendered it with ReactDOM.render(). This approach displayed the calculator on the webpage and allowed me to interact with it. I extensively tested each operation (addition, subtraction, multiplication and division) with the numbers 12 and 6. The following are the results for each operation:

1. **Addition (12+6):** The program correctly displayed 18 showing that the addition function works properly.
2. **Subtraction (12-6):** The result was 6 as expected
3. **Multiplication (12\*6):** The answer displayed was 72 which is correct.
4. **Division (12/6):** The division operation also functions correctly, displaying the answer as 2

In addition, I attempted division by zero (12/0), and the program returned the error message “Cannot divide by zero” as expected.

**Screenshots:**

**Homepage:**

A calculator form with a green background

Description automatically generated

**Addition:**

A calculator form with a green background

Description automatically generated

**Subtraction:**

A calculator form with text and numbers

Description automatically generated

**Multiplication:**

A screenshot of a calculator

Description automatically generated

**Division:**

A screenshot of a calculator

Description automatically generated

**Division by Zero:**

A calculator with a green background

Description automatically generated