

Simple Calculator Task

The goal is to create a simple calculator from scratch using React.js.

Requirements

Goal 1

Build the basic UI for the calculator, which has the following elements:

- 1. An area at the top to display the input or result
- 2. 10 buttons for numbers 0-9
- 3. 4 buttons for operations (Add, Subtract, Multiply & Divide)
- 4. Clear button (completely clears the stack, akin to AC in a real calculator)
- 5. = button (computes and displays the result)
- 6. Operation buttons also compute and display intermediate results

Here’s a rough diagram of how it should be laid out. (Note: Refer to the [Judgement Criteria](#) at the bottom. There are no points for styling/aesthetics, so avoid spending time there and focus on the functionality).

1234			
1	2	3	Add (+)
4	5	6	Subtract (-)
7	8	9	Multiply (*)
Clear	0	=	Divide (/)

Here’s an example of how it must function:

- Default state must display ‘0’
- Pressing the key [‘2’] shows the operand ‘2’
- Pressing the keys [‘2’ ‘+’] in sequence continues to show operand ‘2’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’] in sequence shows operand ‘3’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’] in sequence shows intermediate result ‘5’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’ ‘1’] in sequence shows operand ‘1’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’ ‘1’ ‘*’] in sequence shows intermediate result ‘4’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’ ‘1’ ‘*’ ‘10’] in sequence shows operand ‘10’
- Pressing the keys [‘2’ ‘+’ ‘3’ ‘-’ ‘1’ ‘*’ ‘10’ ‘=’] in sequence shows result ‘40’

Note that this is a simple calculator that does not follow BODMAS, and simply evaluates the stack in order as the keys are pressed, ie. $2 + 3 - 1 * 10 = 40$ and not -5.

Goal 2

Add a 2-button toggle between ‘Light Theme’ and ‘Dark Theme’.

Light Theme	Dark Theme
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In Light mode, the background color of the page should be white (#fff). The background color of the calculator buttons should be gray (#f0f0f0) and the font color should be black (#000).

In Dark mode, the background color of the page should be black (#000). The background color of the calculator buttons should be dark gray (#666) and the font color should be white (#fff).

Judgement Criteria

This is a test to understand your ability to write clean, reusable components and to demonstrate your understanding of component state, props & lifecycle. *Therefore, avoid using external libraries and write components from scratch as much as possible.*

There are no separate points for aesthetics. Functionality & logic will be prioritized. Don't worry if styling isn't perfect, etc.

You will be judged on the following aspects:

1. Code Style - Use indents, spaces wisely.
2. Code Quality - Proper usage of React-Redux.
3. Completion of Goals

Instructions:

1. Create a public repository under your github account.
2. Share your repository link.
3. Time of completion of this assignment is 1 day.

GOOD LUCK!

Send an email to hello@duexpress.in if you have any questions.