

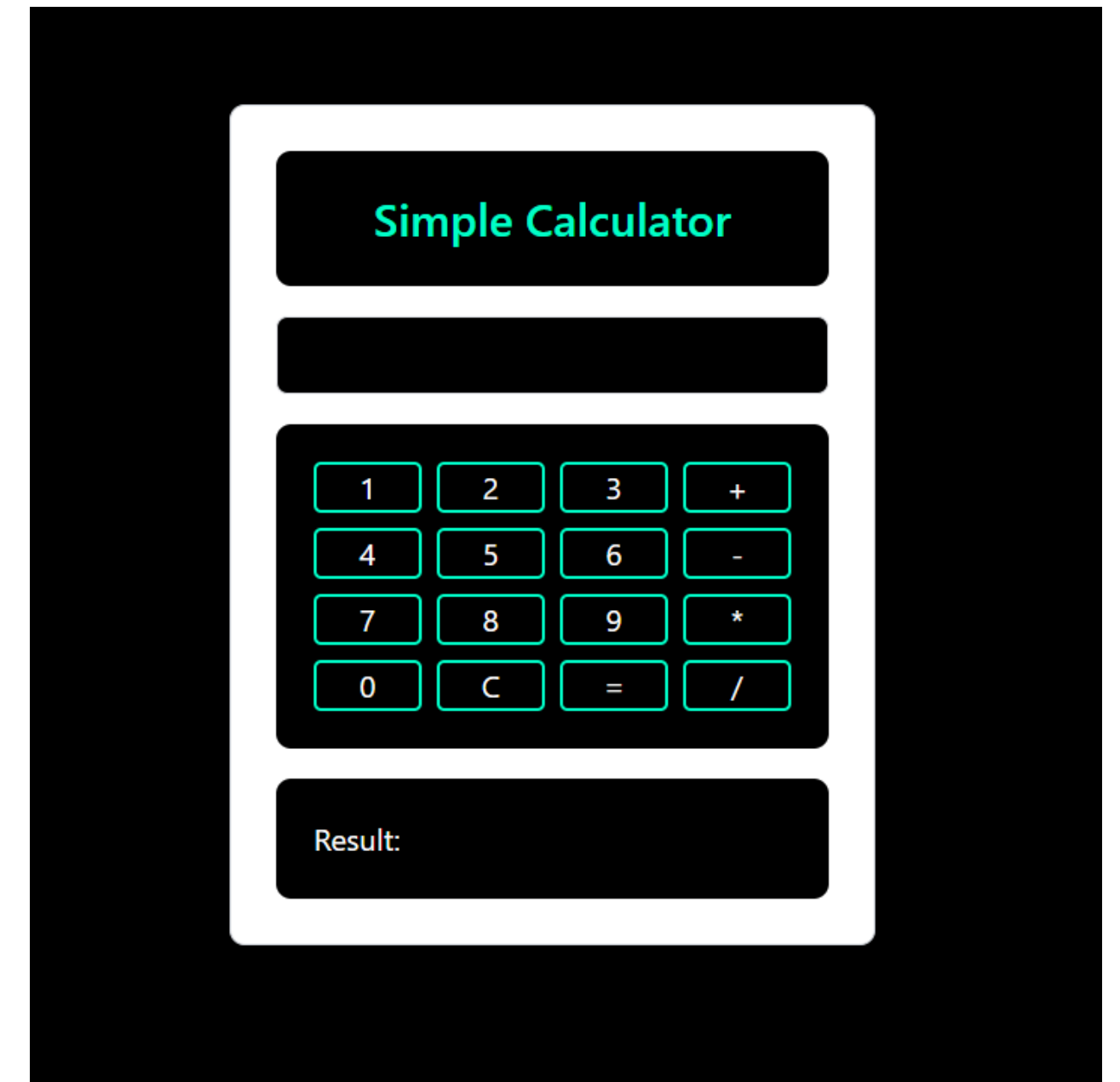
Simple Calculator

**By-
Kaif Mohammad
2110991735
G-27**

Introduction

In today's digital age, the demand for versatile and user-friendly applications has seen remarkable growth. Calculators, as indispensable tools for a multitude of tasks, have made the transition from physical devices to digital platforms. This report introduces **My Simple Calculator**, a user-friendly and efficient calculator application designed and developed by me.

Simple Calculator was created with the primary aim of providing users with a convenient and reliable tool for performing a wide range of mathematical calculations. This application is designed for anyone who needs to perform arithmetic operations, from basic calculations to more complex mathematical expressions.



Functions and Methods

Calculator App Functions and Methods

1. Calculator Component

The primary component of the calculator app, responsible for rendering the user interface and handling user interactions.

State Variables

- **input:** Stores the current input expression entered by the user.
- **output:** Stores the result of the calculation or an error message.

Methods

1. **handleInput(value):** This function is triggered when a digit or operator button is clicked. It updates the input state by appending the clicked value to the current input string.
2. **calculateResult():** This function is called when the "=" button is clicked. It attempts to evaluate the current input expression using JavaScript's `eval()` function and updates the output state with the result. If an error occurs during evaluation, it sets the output to "Error."
3. **clearInput():** This function is called when the "C" (clear) button is clicked. It clears both the input and output states, effectively resetting the calculator.

2. render() Method

This method defines the layout and structure of the calculator user interface. It includes the following elements:

- **Input field:** Displays the current input expression, set to read-only.
- **Digit buttons:** Buttons for digits 0-9 to input numbers.
- **Operator buttons:** Buttons for basic arithmetic operations (+, -, *, /).
- **Clear button (C):** Clears the input and output.
- **Equals button (=):** Initiates the calculation.
- **Result display:** Displays the calculated result or an error message.

3. Styling

The `className` attributes are used to apply Tailwind CSS classes for styling. These classes define the appearance and layout of the calculator, including responsiveness, padding, borders, and shadow effects.

4. Event Handlers

The digit, operator, clear, and equals buttons are configured with `onClick` event handlers, which trigger the appropriate functions when clicked by the user.

The `onClick` event handlers enable user interaction and control the behavior of the calculator.

Summary

My Simple Calculator represents a user-focused and robust calculator application catering to a diverse audience, ranging from students to professionals. This versatile tool offers a streamlined and intuitive user interface, simplifying complex mathematical calculations and rendering them accessible to individuals at all skill levels. The application encompasses fundamental arithmetic functions, encompassing addition, subtraction, multiplication, and division, thereby accommodating a wide spectrum of mathematical requirements. An exceptional feature is the incorporation of intelligent error handling, which ensures that even when users input invalid expressions, the app responds gracefully, thus ensuring a seamlessly smooth and uninterrupted experience.

The calculator app boasts a responsive design, effortlessly adapting to the varying screen sizes of both mobile devices and desktop computers, thereby offering a consistent, user-centric experience. The core ethos behind "My Calculator App" lies in its commitment to delivering simplicity and functionality. It serves as an indispensable tool for everyday mathematical tasks, embodying a minimalistic design, user-friendliness, and an unwavering focus on error-free calculations. We welcome and value user feedback, as it is instrumental in our ongoing efforts to improve and enhance the application. Thank you for choosing **My Simple Calculator** as your trusted and versatile calculation solution.

Name-Kaif Mohammad
Roll number.-2110991735
Group-27