Basic Calculator

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Domain: Full Stack Web Development

Type: Basic Project

Introduction:

In this assignment, I have created a basic calculator using HTML, CSS, and JavaScript. The goal of this project is to develop a functional calculator that can perform arithmetic operations, such as addition, subtraction, multiplication, and division. All the operations will work on the basic principles of BODMAS (Brackets, Off, Division, Multiplication, Addition, Subtraction).

Objective:

- Core objective is to develop a functioning basic calculator.

- Calculator should be able to perform basic arithmetic operations like Addition, Subtraction, Multiplication, and Division.

- This web application should be responsive in nature i.e, should adapt according to different screen sizes and change orientation to fit perfectly.

Technologies Used:

- **JavaScript:** JavaScript is a high-level, versatile, and interpreted programming language primarily used to create interactive and dynamic content on websites. It is a core technology of the web, alongside HTML and CSS, enabling developers to build responsive and feature-rich user interfaces.

- **HTML:** HTML (HyperText Markup Language) is the standard language used to create and structure content on the web. It uses a system of tags to define elements such as headings, paragraphs, links, images, and more.

- **CSS:** CSS (Cascading Style Sheets) is a language used to style and layout HTML content on web pages. It controls the appearance of elements, such as colors, fonts, spacing, and overall design.

- **Vite:** Vite is a modern front-end build tool and development server designed for fast and efficient development. It is particularly popular for projects using frameworks like React, Vue, and Svelte.

- **ReactJS:** ReactJS is a popular JavaScript library for building dynamic, interactive, and reusable user interfaces, especially for single-page applications (SPAs). It was developed by Facebook and is maintained by Meta and an open-source community.

Features:

- **Responsiveness:** Responsiveness in websites refers to the design and development approach that ensures a website looks and functions well on a wide variety of devices and screen sizes, including desktops, tablets, and mobile phones.

- **BODMAS:** BODMAS is a mathematical rule that determines the order of operations to solve expressions with multiple operators.
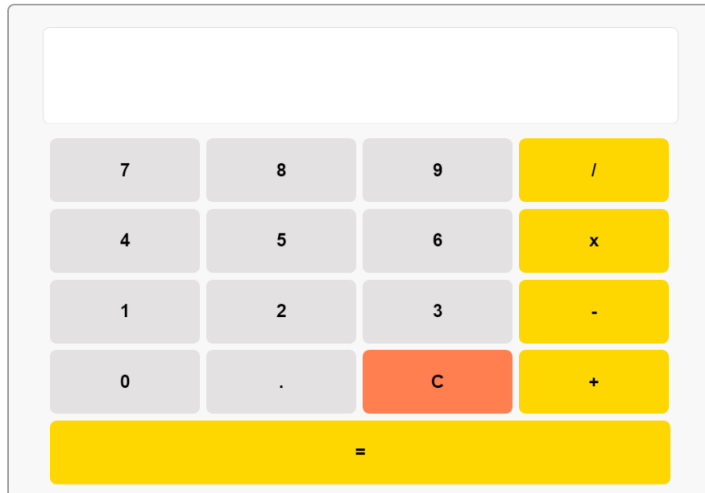
  The acronym stands for:

  B: Brackets (solve expressions inside brackets first)
  O: Orders (exponents like squares, cubes, or roots)
  D: Division (from left to right)
  M: Multiplication (from left to right)
  A: Addition (from left to right)
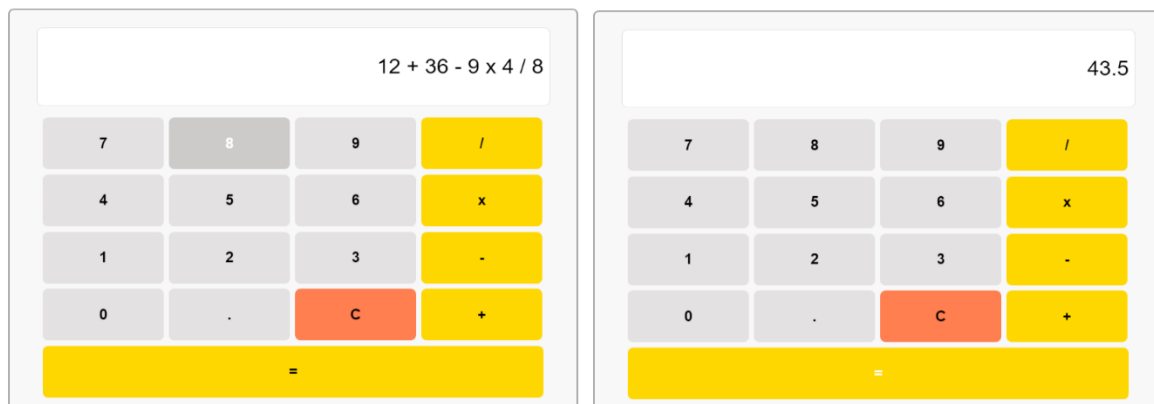 **S**: Subtraction (from left to right)

- **Easy To Use UI:** An easy-to-use User Interface (UI) is a design that is intuitive, efficient, and enjoyable for users to interact with. It ensures that people can achieve their goals with minimal effort, regardless of their technical skill level.

Working:

a) Basic Design

b) BODMAS Implementation

Summary:

This assignment involves the creation of a responsive, basic calculator using HTML, CSS, and JavaScript, designed to perform arithmetic operations such as addition, subtraction, multiplication, and division based on the principles of BODMAS. The project emphasizes responsiveness to adapt seamlessly to various screen sizes and orientations, while providing an intuitive and user-friendly interface. Key technologies used include JavaScript for dynamic functionality, HTML for structuring content, CSS for styling, Vite for efficient development, and ReactJS for building reusable, interactive components. The calculator is designed to offer a straightforward and accessible user experience, with a focus on clarity and functionality.

Source Code: https://github.com/deveshm019/basic-calculator.git