

# Basic Calculator – Project Report

**Developed By:** Soham Sumant Aeer  
Full Stack Web Development Intern @ Unified Mentor Pvt. Ltd.

## 1. Project Overview

The Basic Calculator project is a web-based application developed using HTML, CSS, and JavaScript. The objective of this project is to build a fully functional calculator capable of performing basic arithmetic operations such as addition, subtraction, multiplication, and division with proper input handling and error management.

## 2. Technologies Used

- 1 HTML – Structure and layout of the calculator
- 2 CSS – Styling, responsiveness, and button design
- 3 JavaScript – Calculator logic, keyboard input, and error handling

## 3. Features

- 1 Perform arithmetic operations: Addition, Subtraction, Multiplication, Division
- 2 Responsive and user-friendly interface
- 3 Supports both button and keyboard input
- 4 Clear (C) and Backspace (B) functionality
- 5 Error handling for invalid expressions and division by zero
- 6 Optional dark theme for improved appearance

## 4. Project Structure

```
Basic-Calculator/  
└── index.html  
└── style.css  
└── script.js  
└── README.md
```

## 5. How to Use

- 1 Open index.html in any modern web browser
- 2 Enter numbers using on-screen buttons or keyboard
- 3 Use arithmetic operators for calculations
- 4 Press '=' or Enter to calculate the result
- 5 Use 'C' to clear input and 'B' to delete last character

## 6. Error Handling

- 1 Displays 'Error' for invalid expressions or syntax issues
- 2 Prevents division by zero
- 3 Handles incomplete or incorrect inputs gracefully

## 7. Example Operations

Operation	Result
$8 + 2$	10
$9 - 4$	5
$5 * 3$	15
$12 / 4$	3

## 8. Submission Checklist

- 1 HTML, CSS, and JavaScript files included
- 2 Code commented and easy to understand
- 3 Calculator fully functional and tested
- 4 README file properly documented
- 5 Responsive design for mobile and desktop

## 9. Conclusion

The Basic Calculator project successfully demonstrates the implementation of core JavaScript concepts, event handling, and responsive UI design. It serves as a strong foundational project for front-end and full-stack development practice.