# Basic Calculator

A simple, responsive calculator built using HTML, CSS, and JavaScript. This project allows users to perform basic arithmetic operations in a user-friendly interface.

**Features**

* Perform basic arithmetic operations: Addition, Subtraction, Multiplication, and Division.
* Supports parentheses for complex calculations.
* Real-time display updates.
* Clear (AC) and Backspace functionality for easy editing.
* Responsive design for seamless use on different devices.

**Technologies Used**

* **HTML**: Structuring the calculator layout and buttons.
* **CSS**: Styling the calculator with a modern and responsive design.
* **JavaScript**: Implementing core functionalities such as input handling, operations, and calculations.

**How to Run the Project**

1. Clone this repository or download the ZIP file.
2. Open the index.html file in any modern web browser.
3. Use the calculator by clicking on the buttons to perform calculations.

**File Structure**

Basic Calculator/

├── index.html # HTML structure of the calculator

├── styles.css # CSS file for styling

└── script3.js # JavaScript file for functionality

**Usage Instructions**

1. **Number Input**:
   * Click the number buttons (0-9) to input values.
2. **Operators**:
   * Use +, -, \*, / for addition, subtraction, multiplication, and division.
3. **Parentheses**:
   * Click ( or ) to include parentheses for complex expressions.
4. **Backspace**:
   * Use the Back button to remove the last entered character.
5. **Clear**:
   * Click AC to reset the calculator to its initial state.
6. **Calculate**:
   * Press = to evaluate the expression.

**Screenshots**

*(Add screenshots of your calculator in action, if possible.)*

**Challenges Faced**

* Input validation to prevent invalid expressions.
* Managing dynamic updates to the display.
* Handling errors during calculations gracefully.

**Future Enhancements**

* Add scientific operations like square root, exponentiation, and trigonometric functions.
* Include memory storage and history log features.
* Implement keyboard input support for enhanced usability.
* Provide theme customization (light/dark modes).

**Acknowledgements**

* This project was developed as part of a learning exercise to enhance front-end web development skills.

**License**

This project is open-source and available under the MIT License.