# PROJRCT REPORT

## CALCULATOR PROJECT

## Introduction

This report outlines the design and functionality of a web-based calculator application. The project includes HTML for the structure and CSS for styling, creating an interactive and visually appealing calculator interface. The calculator supports basic arithmetic operations, including addition, subtraction, multiplication, and division.

## HTML Code Description

The HTML file provides the structure for the calculator, consisting of:

1. **Header Section**: Displays the title "CALCULATOR."
2. **Form Section**: Contains:
   - An input field (#display) to show the user input and results.
   - Buttons for digits (0–9), operations (+, -, *, /), and control actions (C for clear and = for calculation).

## Key Features:

- Button interactions are handled using inline JavaScript within onclick attributes.
- The eval() function evaluates arithmetic expressions entered in the display field.

## CSS Code Description

The CSS styles the calculator to enhance usability and aesthetics:

1. **Container Styling**:
   - Centers the calculator on the screen with a responsive design.
   - Adds a red background (#e70000) and shadow effects for a modern look.
2. **Display Styling**:
   - Creates a white display box with rounded corners and subtle shadowing.
   - Ensures readability with a large font size and text alignment to the right.
3. **Button Styling**:
   - Differentiates buttons into digit (.digits) and operation (.math Buttons) categories.
   - Uses hover effects to highlight buttons when interacted with, providing a dynamic user experience.

  - The "Clear" button (#clearButton) has a distinctive red theme to signify its functionality.

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## Functionality

The calculator is fully functional for basic arithmetic:

1. **User Input**: Buttons append values to the display field.
2. **Calculation**: The = button uses JavaScript's eval() to compute the result of the expression.
3. **Clear Display**: The C button resets the display.

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## Conclusion

This calculator project is a well-rounded example of combining HTML, CSS, and JavaScript to create an interactive web application. It demonstrates:

- **Responsive Design**: Ensuring the calculator adapts to different screen sizes.
- **User Experience**: Enhancing usability with intuitive styling and interactivity.
- **Functionality**: Supporting essential arithmetic operations effectively.

Further improvements could include:

- Validating input to prevent errors (e.g., using eval() safely).
- Adding advanced features like percentage, square root, or memory storage.