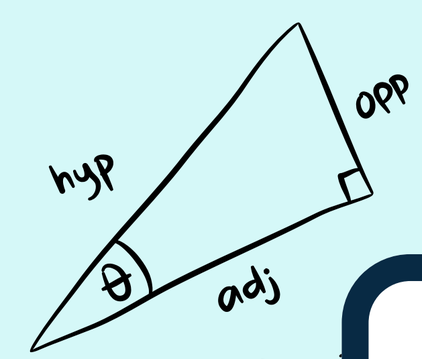
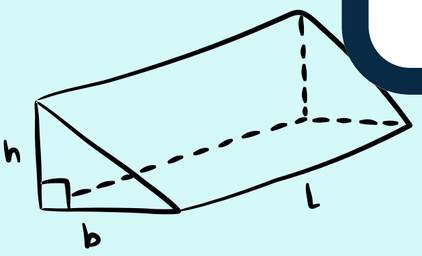
Capstone Project

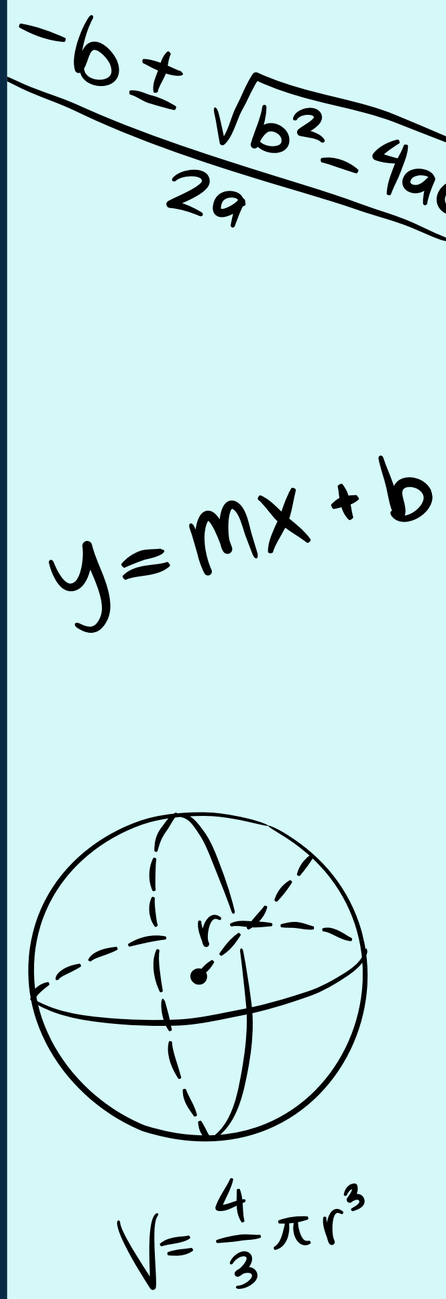
Simple Calculator





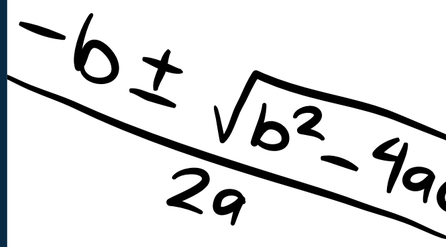
Project Overview

A simple two-input calculator that performs basic arithmetic operations. To make quick and easy calculations without dealing with complex operator precedence. This project was created as part of my capstone project to demonstrate the use of AI in supporting development from learning in Hacktiv8 (Code Generation and Optimization using IBM Granite).

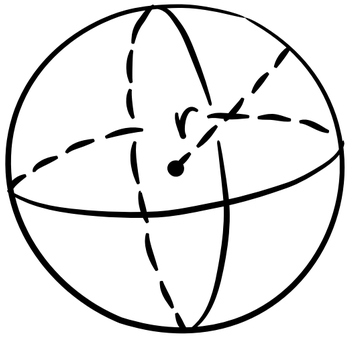


TECHNOLOGIES USED

- **Devc++:** to write C++
- **VS Code:** to write HTML CSS JS
- **ChatGPT:** coding assistant
- **Netlify:** deploy the simple calculator



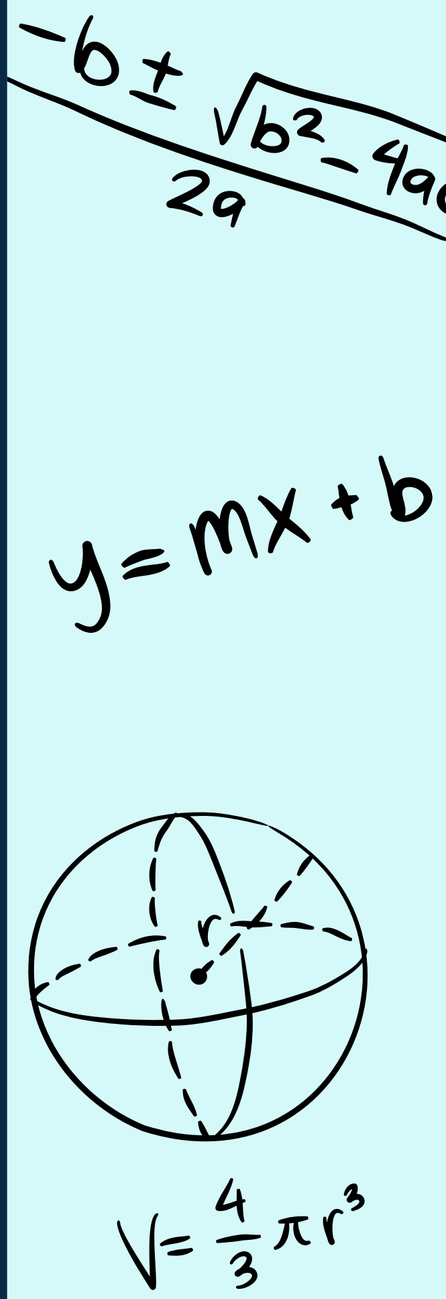
$y = mx + b$



$V = \frac{4}{3}\pi r^3$

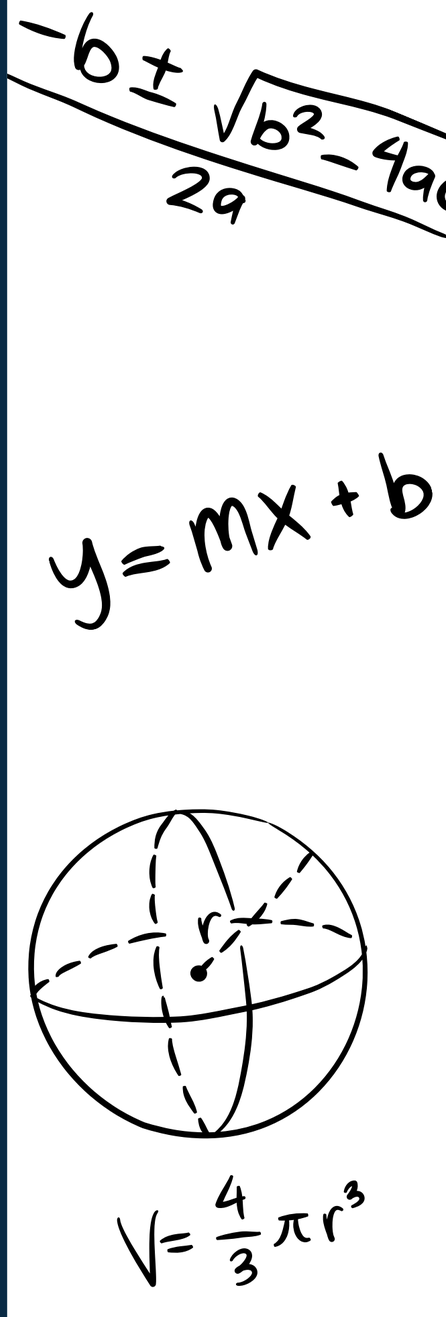
Features

This system can count two operations, for example a+b or a-b or a/b or a*b.

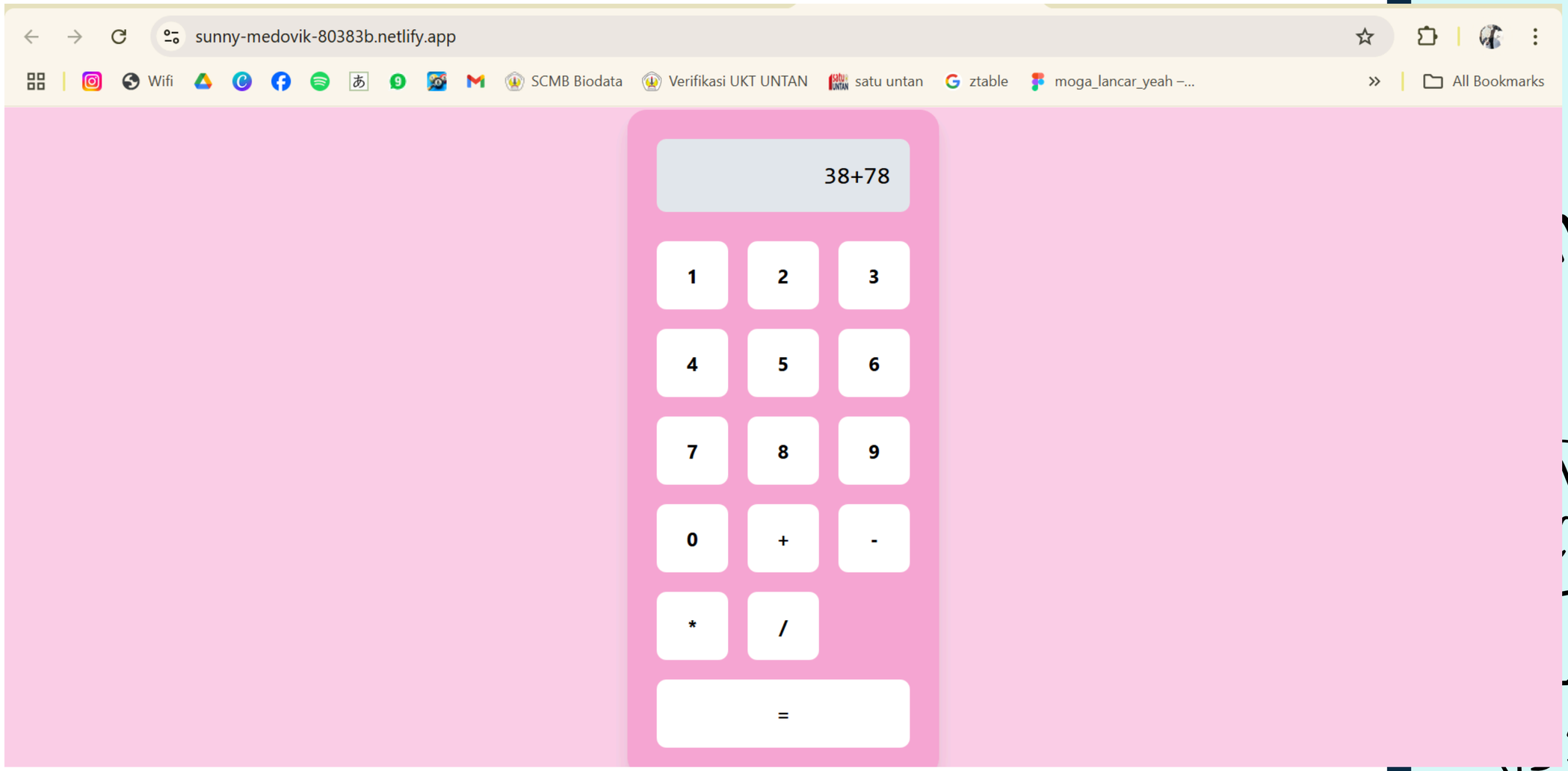


AI SUPPORT

- Layout Designer: helped create the HTML and CSS (using Tailwind) for a simple calculator layout, based on my prompt describing a large soft pink background, a soft gray input field, and white keypad buttons with black text.
- Translator: converted my C++ calculator algorithm into JavaScript and connected it to the HTML and CSS code.
- Debugging Assistant: helped fix a bug where the calculator would not clear the previous result when starting a new calculation. After showing the result, clicking a number now automatically clears the old value.



Demo Capture



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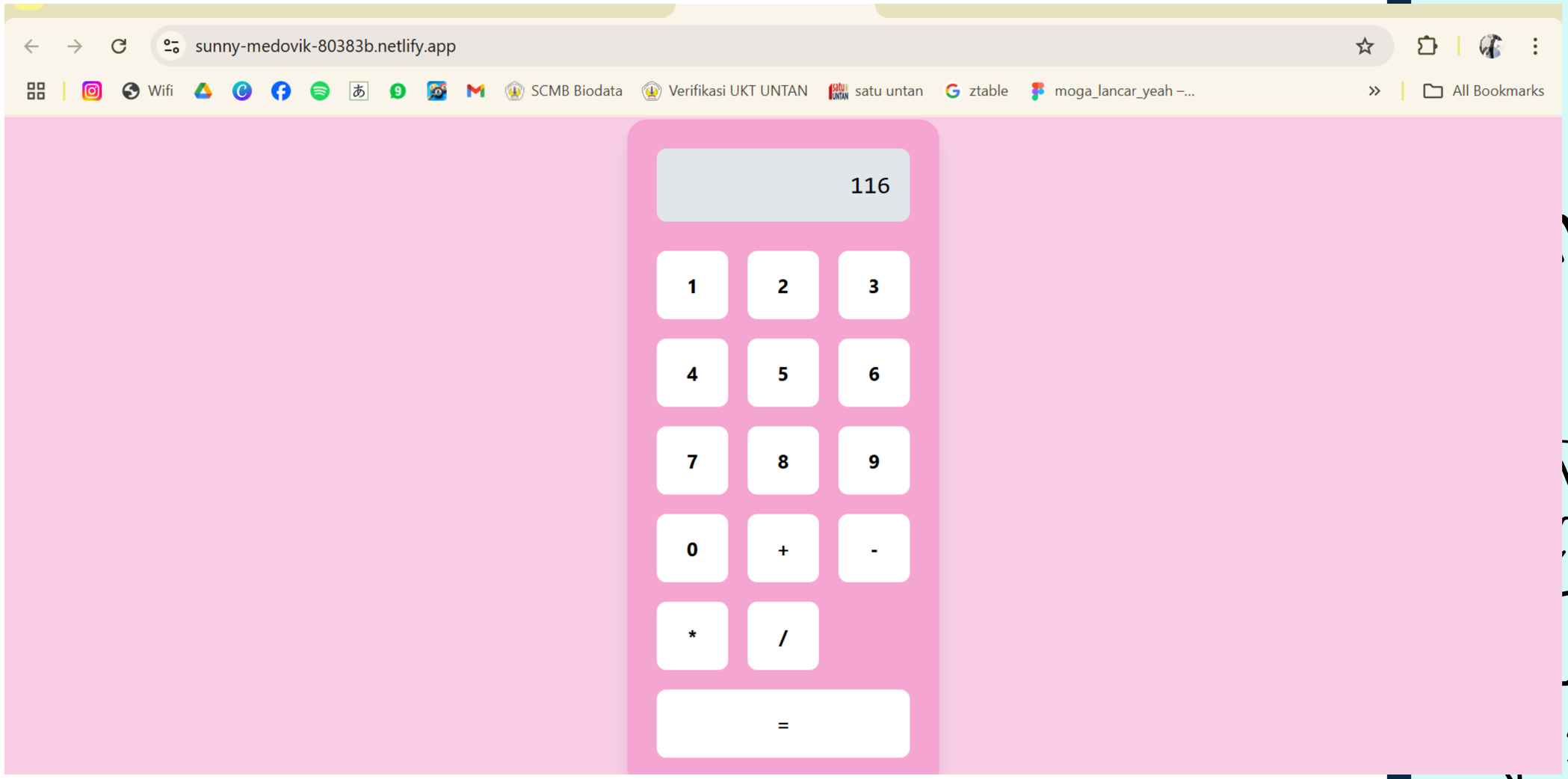
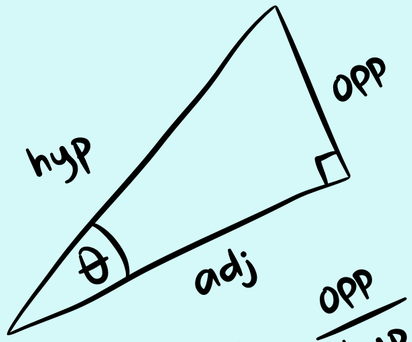


Thank You!



$$\sin(\theta) = \frac{opp}{hyp}$$

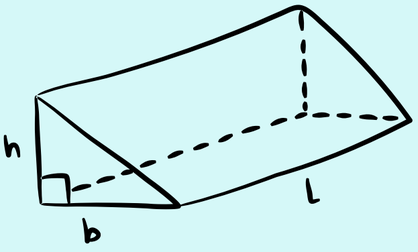
$$V = lwh$$

$$V = \pi r^2 h$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$y = mx + b$$

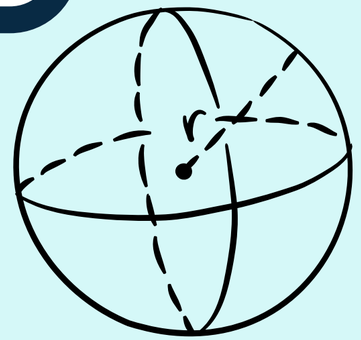
$$a = \frac{V_f - V}{t}$$



$$V = \frac{1}{2}bhl$$

$$\frac{x}{a} + \frac{y}{b} = 1$$

$$ax^2 + bx + c = 0$$



$$V = \frac{4}{3}\pi r^3$$