NextHikes

Calculator

In Python

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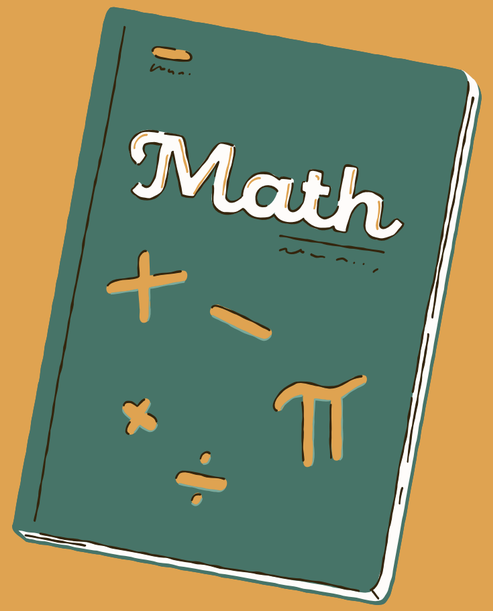


Introduction

A calculator is a basic Python application to perform arithmetic operations.

Language Used

Python provides multiple ways to create a calculator (CLI-based, GUI-based) using Tkinter Library.

Arithmetic

+	Addition
−	Subtraction
$\log^{10}$	Logarithm

Operations

×	Multiplication
÷	Division
%	Percentage

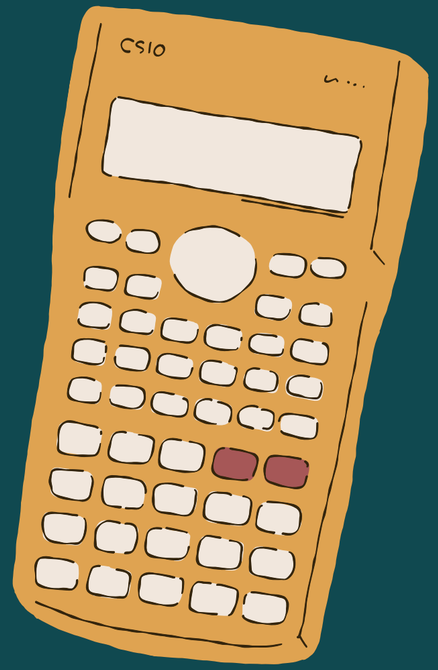
Interface

A user interface (UI) is the way a user interacts with a device or program.

User Interface are of two types:

1. CLI - Command Line User Interface.
2. GUI - Graphical User Interface.

1. Multiply the numbers
2. Multiply the variables



Tkinter

Tkinter is Python's built-in library for GUI applications.

Library

Provides widgets like buttons, labels, and entry fields to create an interactive calculator.

Creating a Basic GUI Calculator

Steps to create a GUI calculator

1. Open Visual Studio Code
2. Open Project and create file
3. Add an entry field for input
4. Add buttons for numbers & operators
5. Implement event handling for calculations

Code Structure

1. Open Project 1
2. Open File Cal.py

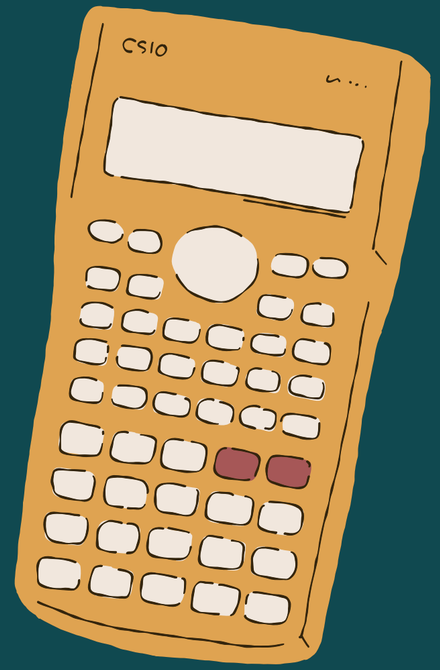
Import Tkinter

1. Create Class Calculator

- Define Method init with self and master attributes

  > Create master container with input field and buttons in dynamic rows and columns keyboard.

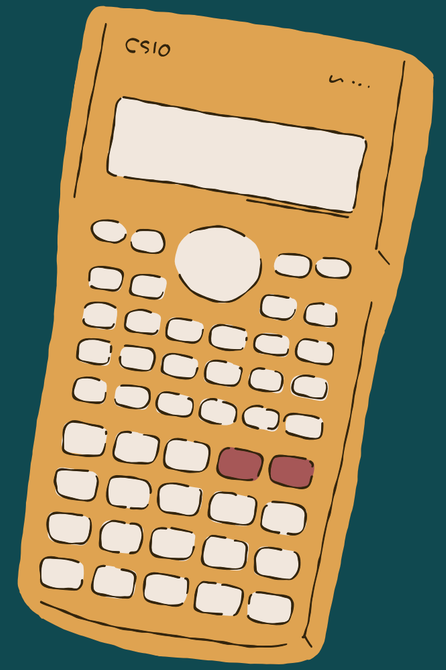
2. Create input field for input by defining method create_display.



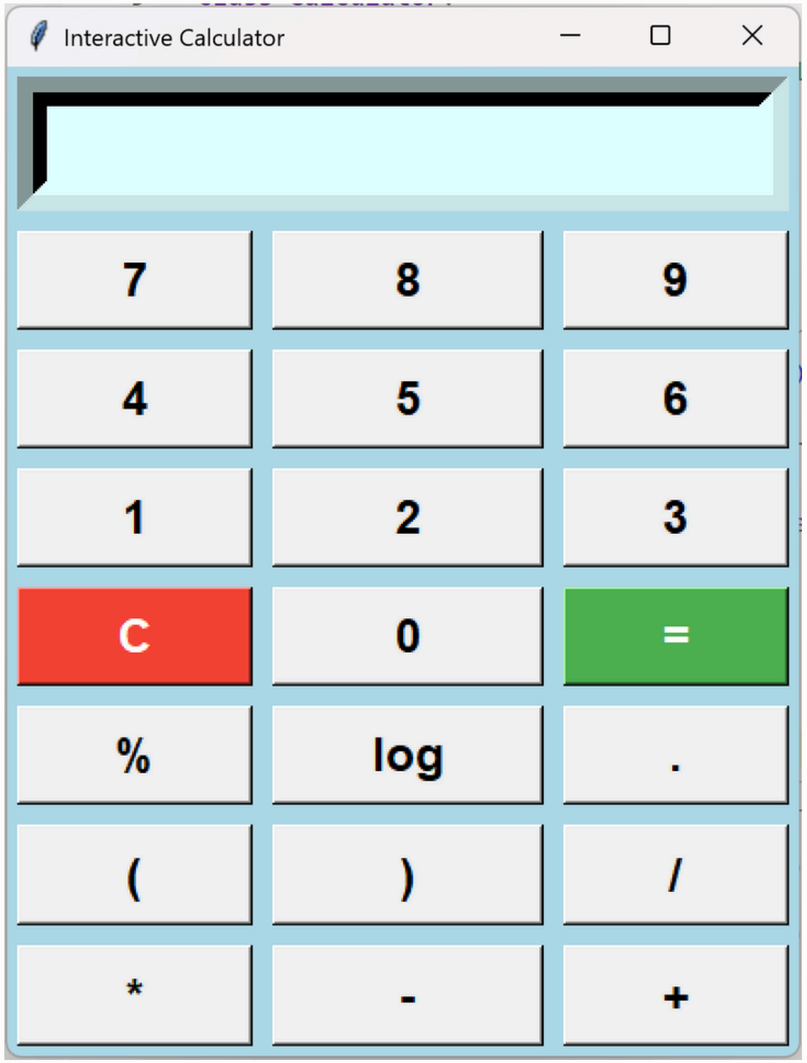
Code Structure

1. Open Project 1
2. Open File Cal.py

3. Create buttons layout by defining method create_buttons.
    - Create hover effect on buttons.
4. Define methods show, clear, solve, calculate_percentage, calculate_logarithm, handle_keypress for calculations and print and delete the numeric text.
5. Create and run the class calculator.



Calculator

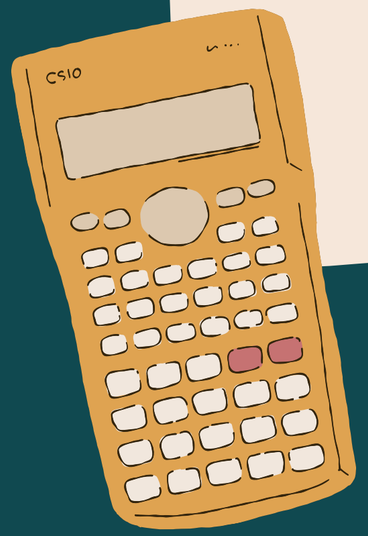


Conclusion

Simplify the following using algebraic notation:

Python makes it easy to build both CLI and GUI-based calculators.

Tkinter is a powerful library for simple GUI applications.

Thank you!

Any Questions?