

Project Title: Calculator in Python

Brief One-Line Summary

A simple yet functional Python-based calculator capable of performing basic arithmetic operations using a clean, modular, and extensible code structure.

Overview

This project involves the development of a Python calculator application that performs essential arithmetic operations such as addition, subtraction, multiplication, and division. The calculator is designed with readability, modularity, and extensibility in mind.

Problem Statement

Learners require a simple tool to understand calculation logic and programming fundamentals. Building a calculator in Python demonstrates input handling, conditional logic, functions, and error management.

Tools and Technologies

- Python 3.x
- operator library
- Optional GUI: Tkinter / PyQt
- IDE: VS Code / PyCharm

Methods

1. Requirement Analysis
2. Design & Modularization
3. Implementation
4. Testing
5. Optional GUI Development

Key Insights

- Emphasizes strong modular design
- Demonstrates safe arithmetic operations
- Easily extendable for GUI or scientific functions

Results & Conclusion

The calculator performs all core arithmetic tasks and is easily expandable. It highlights Python's suitability for building simple yet scalable utilities.

Future Work

- Add scientific functions
- Build GUI version
- Add history tracking
- Package as standalone desktop app