# Synopsis Calculator with UI using Python

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## 1 Introduction

In this project, we aim to develop a calculator application with a graphical user interface (GUI) using Python and Tkinter. The calculator will be designed to perform basic arithmetic operations such as addition, subtraction, multiplication, and division, making it a user-friendly tool for performing mathematical calculations.

## 2 Objective

The primary objectives of this project are as follows:

- To create a user-friendly calculator with a graphical user interface.

- To implement basic arithmetic operations (addition, subtraction, multiplication, division).

- To provide a clear and intuitive user interface for input and displaying results.

- To enhance user experience by incorporating user-friendly design and functionality.

## 3 Methodology

The project will be implemented using the following methodology:

- **Python Programming:** We will use the Python programming language for the core logic of the calculator.

- **Tkinter Library:** The Tkinter library will be utilized to create the graphical user interface for the calculator.

- **UI Design:** The calculator's user interface will be designed with user experience in mind, ensuring that it is easy to use and visually appealing.

- **Arithmetic Operations:** We will implement the basic arithmetic operations (addition, subtraction, multiplication, division) in the Python code.

- **Event Handling:** Event handling will be used to capture user input and perform calculations based on the user's selections.

## 4    Features

The calculator will include the following features:

- Buttons for digits 0-9.

- Buttons for addition, subtraction, multiplication, and division.

- A clear button to reset the input.

- An equals (=) button to calculate the result.

- A display area to show the input and the calculated result.

## 5    Conclusion

By the completion of this project, we will have a fully functional calculator with a user-friendly graphical user interface. This calculator will be capable of performing basic arithmetic operations, and its design will prioritize an intuitive user experience.

# 6 output