

# Project Report

## Calculator Application using Python

### Introduction:

The calculator application is a basic program that performs arithmetic operations such as addition, subtraction, multiplication, and division. In this project, I have developed a calculator application using Python programming language and its Tkinter module. The main objective of this project is to create a simple and user-friendly calculator that can perform basic arithmetic operations.

### Methodology:

To create this calculator application, we have used Python programming language and the Tkinter module. Tkinter is a standard GUI library for Python that provides a set of tools for creating graphical user interfaces. We have used the following steps to develop this application:

1. **Designing the User Interface:** The first step in creating any GUI application is to design the user interface. We have used the Tkinter module to create the user interface for our calculator application. The user interface consists of a display screen and buttons for performing arithmetic operations.
2. **Implementing the Arithmetic Operations:** After designing the user interface, we have implemented the arithmetic operations using Python programming language. We have used simple mathematical functions such as addition, subtraction, multiplication, and division to perform these operations.
3. **Adding Error Handling:** To ensure that our calculator application works correctly, we have added error handling to handle any invalid inputs or division by zero errors.
4. **Testing:** Finally, we have tested our calculator application to ensure that it works correctly and meets our requirements.

### Results:

Our calculator application provides a simple and user-friendly interface for performing basic arithmetic operations. It can perform addition, subtraction, multiplication, and division operations with ease. The application also includes error handling to ensure that it works correctly even with invalid inputs. And gives correct results with all valid inputs.

### Conclusion:

In conclusion, we have successfully developed a calculator application using Python and the Tkinter module and messagebox function. The application provides a simple and user-friendly interface for performing basic arithmetic operations. It can be further improved by adding more advanced features such as scientific functions and memory storage. Overall, this project has helped me to gain a better understanding of Python programming language and GUI development using the Tkinter module.

