Python Calculator Project

A PROJECT REPORT

Submitted by

Divyansh Marwaha

In partial fulfillment for the award of the degree of

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BACHELOR OF ENGINEERING

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BONAFIDE CERTIFICATE

Certified that this project report **"Python Calculator Project"** is the bonafide work of "**Divyansh Marwaha"** who carried out the project work under **Mr. Gurbheje singh.**

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

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Chapter 1: Introduction

Many operations require one or more operands in order to form a complete instruction and most assembler can take expressions of numbers and named constants as well as registers and labels as operands, freeing the programmer from tedious repetitive calculations. Depending on the architecture, these elements are also being combined with specific instructions or addressing mode using offsets or other data as well as fixed addresses.

Many assemblers offer additional mechanisms to facilitate program development to control the assembly process and to aid debugging.

Chapter 2: Literature survey

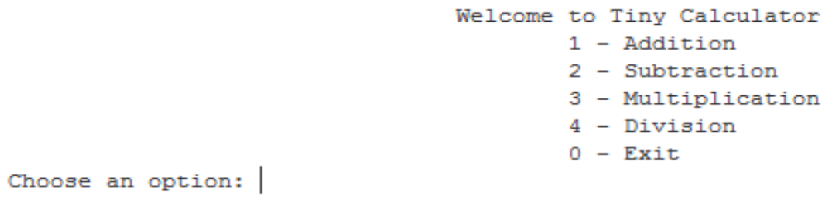
The calculator is one application that we all use in our day to day lives. If you are trying to get your hands dirty with programming in python, Calculator is a project which is easy and useful at the same time. Today, we are going to build a Python Calculator using Tkinter with easy to understand steps.

Chapter 3: Design flow/Process

At the very first of our program, it will show the options to be calculated.

If the input is valid then it will go to the next step and if it is not, then it will show the invalid number and exiting from the program.

If the input is valid then the next step it will do the operations that user wants to operate.



If user input 1 it will take input from the user and will do the addition of two entered numbers. And the result is distributed in Decimal.

If user input 2 it will take input from the user and will do the subtraction of two entered numbers. And the result is distributed in Decimal.

If user input 3 it will take input from the user and will do the multiplication of two entered numbers. And the result is distributed in Decimal.

If user input 4 it will take input from the user and will do the division of two entered numbers. In this case, it will also show the remainder of the numbers after divided. And the result is distributed in Decimal.

After every operation, it will take your opinion that either you want to exit, or you want further calculation. If you want to exit, then it will simply exit by entering 0. Otherwise, it will start from the beginning of the program.

Chapter 4 Results analysis and validation

Here is the snapshot of Addition, Subtraction, Multiplication, and Division accordingly.

```
                                    Welcome to Tiny Calculator
                                            1 - Addition
                                            2 - Subtraction
                                            3 - Multiplication
                                            4 - Division
                                            0 - Exit

   Choose an option: 1
   Please enter first number: 2
   Please enter second number: 5
   The addition of 2 , 5 is = 7

                                Welcome to Tiny Calculator
                                        1 - Addition
                                        2 - Subtraction
                                        3 - Multiplication
                                        4 - Division
                                        0 - Exit
Choose an option: 2
Please enter first number: 4
Please enter second number: 7
The substraction of 4 , 7 is = -3

                                Welcome to Tiny Calculator
                                        1 - Addition
                                        2 - Subtraction
                                        3 - Multiplication
                                        4 - Division
                                        0 - Exit
Choose an option: 3
Please enter first number: 4
Please enter second number: 6
The multiplication of 4 , 6 is = 24

                                Welcome to Tiny Calculator
                                        1 - Addition
                                        2 - Subtraction
                                        3 - Multiplication
                                        4 - Division
                                        0 - Exit
Choose an option: 4
Please enter first number: 4
Please enter second number: 4
The quotient of 4 , 4 is = 1
And the remainder is: 0
```

Chapter 5: Conclusion and future work

Assembly language still taught in most computer science and electronic engineering programs. Although few programmers today regularly work with assembly language as a tool, the underlying concepts remain very important. My calculator can calculate with big values. Despite having some limitations, I can get the concept of more perfect programs with this.

Chapter 6: References

1. https://data-flair.training/blogs/python-calculator-project/
2. https://www.researchgate.net/publication/322538460_Developing_Encoder_Using_Python_and_Tiny_Calculator_Using_Assembly_Language_Programming