

SIMPLE CALCULATOR (USING PYTHON)

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Introduction

- A calculator is a basic computational tool that performs arithmetic operations.
- Our focus is to design a simple yet effective calculator using Python.
- This project introduces Python basics like functions, conditionals, and loops.

Objectives

- Create a calculator that can:
Add, Subtract, Multiply, Divide.
- Handle invalid inputs gracefully.
- Provide a user-friendly interface in the terminal.

Features of Our Calculator

- User-defined functions for operations
- Input validation
- Menu-driven interface
- Looping until user decides to exit

Python Code:

```
import tkinter
from tkinter import *
root=Tk()
root.title("Simple calculator")
root.geometry("570x600+100+200")
root.resizable(False,False)
root.configure(bg="#17161b")
equation=""
def show(value):
    global equation
    equation+=value
    label_result.config(text=equation)
```

```
def clear():  
    equation=""  
    label_result.config(text=equation)
```

```
def clear():  
    global equation  
    equation = ""  
    label_result.config(text=equation)
```

```
def calculate():  
    global equation  
    result = ""  
    if equation != "":  
        try:  
            result=eval(equation)
```

except:

```
    result = "error"
```

```
    equation = ""
```

```
    label_result.config(text=result)
```

```
label_result=Label(root,width=25,height=2,text="",font=("arial",30))
```

```
label_result.pack()
```

```
Button(root,text="C",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#3697f5",command=lambda: clear()).place(x=10,y=100)
```

```
Button(root,text="/",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("/")).place(x=150,y=100)
```

```
Button(root,text="%",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("%")).place(x=290,y=100)
```

```
Button(root,text="*",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("*")).place(x=430,y=100)
```

```
Button(root,text="7",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("7")).place(x=10,y=200)
```

```
Button(root,text="8",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("8")).place(x=150,y=200)
```

```
Button(root,text="9",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("9")).place(x=290,y=200)
```

```
Button(root,text="-",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("-")).place(x=430,y=200)
```

```
Button(root,text="4",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("4")).place(x=10,y=300)
```

```
Button(root,text="5",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("5")).place(x=150,y=300)
```

```
Button(root,text="6",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("6")).place(x=290,y=300)
```

```
Button(root,text="+",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("+")).place(x=430,y=300)
```



```
Button(root,text="1",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("1")).place(x=10,y=400)
```

```
Button(root,text="2",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("2")).place(x=150,y=400)
```

```
Button(root,text="3",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("3")).place(x=290,y=400)
```

```
Button(root,text="0",width=11,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("0")).place(x=10,y=500)
```

```
Button(root,text=".",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show(".")).place(x=290,y=500)
```

```
Button(root,text="=",width=5,height=3,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#fe9037",command=lambda: calculate()).place(x=430,y=400)
```

```
root.mainloop()
```

```
import tkinter
from tkinter import *
root=Tk()
root.title("Simple calculator")
root.geometry("570x600+100+200")
root.resizable(False,False)
root.configure(bg="#17161b")
equation=""

def show(value):
    global equation
    equation+=value
    label_result.config(text=equation)

def clear():
    equation=""
    label_result.config(text=equation)

def clear():
    global equation
    equation = ""
    label_result.config(text=equation)

def calculate():
    global equation
    result = ""
    if equation != "":
        try:
            result=eval(equation)
        except:
            result = "error"
            equation = ""
    label_result.config(text=result)

label_result=Label(root,width=25,height=2,text="",font=("arial",30))
label_result.pack()

Button(root,text="C",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#3697f5",command=lambda: clear()).place(x=10,y=100)
Button(root,text="/",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("/")).place(x=150,y=100)
Button(root,text="%",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("%")).place(x=290,y=100)
Button(root,text="*",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("*")).place(x=430,y=100)

Button(root,text="7",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("7")).place(x=10,y=200)
Button(root,text="8",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("8")).place(x=150,y=200)
Button(root,text="9",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("9")).place(x=290,y=200)
Button(root,text=".",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show(".")).place(x=430,y=200)
```



```
label_result.config(text=equation)

def calculate():
    global equation
    result = ""
    if equation != "":
        try:
            result=eval(equation)
        except:
            result = "error"
            equation = ""
    label_result.config(text=result)
```

```
label_result=Label(root,width=25,height=2,text="",font=("arial",30))
label_result.pack()
```

```
Button(root,text="C",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#3697f5",command=lambda: clear()).place(x=10,y=100)
Button(root,text="/",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("/")).place(x=150,y=100)
Button(root,text="%",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("%")).place(x=290,y=100)
Button(root,text="*",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("*")).place(x=430,y=100)
```

```
Button(root,text="7",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("7")).place(x=10,y=200)
Button(root,text="8",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("8")).place(x=150,y=200)
Button(root,text="9",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("9")).place(x=290,y=200)
Button(root,text="-",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("-")).place(x=430,y=200)
```

```
Button(root,text="4",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("4")).place(x=10,y=300)
Button(root,text="5",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("5")).place(x=150,y=300)
Button(root,text="6",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("6")).place(x=290,y=300)
Button(root,text="+",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("+")).place(x=430,y=300)
```

```
Button(root,text="1",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("1")).place(x=10,y=400)
Button(root,text="2",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("2")).place(x=150,y=400)
Button(root,text="3",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("3")).place(x=290,y=400)
Button(root,text="0",width=11,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show("0")).place(x=10,y=500)
```

```
Button(root,text=".",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#2a2d36",command=lambda: show(".")).place(x=290,y=500)
Button(root,text="=",width=5,height=3,font=("arial",30,"bold"),bd=1,fg="#fff",bg="#fe9037",command=lambda: calculate()).place(x=430,y=400)
```

```
root.mainloop()
```



—  

[illegible]


```

root.resizable(False, False)
root.configure(bg="#17161b")
equation=""

def show(value):
    equation = equation + value
    label_result.config(text=equation)

def clear():
    equation=""
    label_result.config(text=equation)

def calculate():
    global equation
    result=""
    if equation!="":
        try:
            result=eval(equation)
        except:
            result="error"
            equation=""
    label_result.config(text=result)

label_result=Label(root,width=25,height=2,text="",font=("arial",30))
label_result.pack()

Button(root,text="C",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#3697f5",command=lambda: clear()).place(x=10,y=100)
Button(root,text="/",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("/")).place(x=150,y=100)
Button(root,text="*",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("*")).place(x=200,y=100)
Button(root,text="+",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("+")).place(x=250,y=100)

Button(root,text="7",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("7")).place(x=10,y=200)
Button(root,text="8",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("8")).place(x=150,y=200)
Button(root,text="9",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("9")).place(x=200,y=200)
Button(root,text="-",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("-")).place(x=250,y=200)

Button(root,text="4",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("4")).place(x=10,y=300)
Button(root,text="5",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("5")).place(x=150,y=300)
Button(root,text="6",width=5,height=1,font=("arial",30,"bold"),bd=1,fg="fff",bg="#2a2d36",command=lambda: show("6")).place(x=200,y=300)

```

