Python Calculator Project

Project Description

This project is a simple **GUI-based calculator** built using Python's **Tkinter** library. It allows users to perform basic arithmetic operations such as addition, subtraction, multiplication, and division.

Features

- User-friendly graphical interface
- Supports addition, subtraction, multiplication, and division
- Includes clear and equal buttons
- Error handling for invalid inputs

Technologies Used

- **Python** (Programming Language)
- **Tkinter** (GUI Library)

How to Run the Project

1. **Download the Python script** (`calculator.py`).
2. **Make sure Python is installed** on your system. If not, download it from python.org.
3. Open a terminal or command prompt and navigate to the project folder.
4. Run the script using the following command:
5. `python calculator.py`
6. The calculator window will open, and you can start performing calculations.

Python Code

```python
from tkinter import Tk, Entry, Button, StringVar

class Calculator:
    def __init__(self, master):
        master.title("Calculator")
        master.geometry("357x420")
        master.config(bg="gray")
        master.resizable(False, False)

        self.equation = StringVar()
        self.entry_value = ""
```

```python
        Entry(master, width=22, font=("Arial", 18),
textvariable=self.equation, bd=10, relief="ridge").grid(row=0, column=0,
columnspan=4)

        buttons = [
            ("(", 1, 0), (")", 1, 1), ("%", 1, 2), ("/", 1, 3),
            ("7", 2, 0), ("8", 2, 1), ("9", 2, 2), ("*", 2, 3),
            ("4", 3, 0), ("5", 3, 1), ("6", 3, 2), ("-", 3, 3),
            ("1", 4, 0), ("2", 4, 1), ("3", 4, 2), ("+", 4, 3),
            ("C", 5, 0), ("0", 5, 1), (".", 5, 2), ("=", 5, 3)
        ]

        for (text, row, col) in buttons:
            Button(master, text=text, width=8, height=3, bg="white" if text
!= "=" else "lightblue",
                   command=lambda t=text: self.click(t)).grid(row=row,
column=col)

    def click(self, value):
        if value == "C":
            self.entry_value = ""
        elif value == "=":
            try:
                self.entry_value = str(eval(self.entry_value))
            except:
                self.entry_value = "Error"
        else:
            self.entry_value += str(value)

        self.equation.set(self.entry_value)

root = Tk()
Calculator(root)
root.mainloop()
```

Submission Details

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