Basic Calculator and Discount Calculator

Objective:

The objective of this code is to generate a code for creating a graphical user interface application using tkinter in Python. It includes a basic calculator to perform arithmetic calculations. The second calculator is the discount calculator to calculate the final price after the discount.

Benefits:

The benefits of the user that can easy and more accurate to compute with the calculator.

Simple interface: Easy to use interface for calculation.

Time-saving: Calculation is done within few seconds.

Toolkit for beginners: It can be used to understand the GUI toolkit for beginner level students.

Purpose: The reason for this code is that the GUI application uses the tkinter library and its code written in this markdown file.

Purpose The code is aimed to outline a tkinter-based GUI application. It allows implementing the solution that creates multiple windows or Toplevel. The user is enabled to carry out basic arithmetic operations and get a discount based on the provided data. * Significance The code is also valuable since it demonstrates how the GUI is programmed in Python via the tkinter library. It can be used as a basis for more complicated solutions. For developers, it can serve as the starting point for designing applications with the same idea.

Significance: This code is significant as it is used as a GUI and takes an input integer and string and displays as it is a string specifies the functionality of tkinter and the output cost is a string means it can not perform the inline addition operation on integer.

Features:

Basic calculator: includes four function – plus, minus, multiply, and divide;

Clear function. The function that allows the user to clear the field in the calculator. It clears the field and resets the value of a or b in python;

Error calculation. If user put error function writhed error. In the future, it is possible to implement a function that does not receive error-alert messages;

Discount: discount . Calculates and outputs the discounted from the main price.

Code:

```python
import tkinter as tk

def calculator():
    calculator_root = tk.Toplevel(root)
    calculator_root.title("Calculator")
    calculator_root.geometry("665x725+150+250")
    calculator_root.configure(bg='#022345')


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

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

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

    label_result = tk.Label(calculator_root, width=25, height=2, text="", font=("arial",30,"bold"), justify= tk.RIGHT)
    label_result.pack()

    # Add buttons here
    button1=tk.Button(calculator_root, text="C", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#fa8a20', fg='#00698f',command=lambda: clear())
    button1.place(x=20, y=135)
    button2=tk.Button(calculator_root, text="/", width=3, height=1, font=("arial", 30, "bold"), bd=1,bg='#122534', fg='#00698f', command=lambda: show("/"))
    button2.place(x=200, y=135)
    button3=tk.Button(calculator_root, text="%", width=3, height=1, font=("arial", 30, "bold"), bd=1,bg='#122534', fg='#00698f', command=lambda: show("%"))
    button3.place(x=390, y=135)
    button4=tk.Button(calculator_root, text="*", width=3, height=1, font=("arial", 30, "bold"), bd=1,bg='#122534', fg='#00698f', command=lambda: show("*"))
    button4.place(x=530, y=135)

    button5=tk.Button(calculator_root, text="7", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("7"))
    button5.place(x=20, y=235)
    button6=tk.Button(calculator_root, text="8", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("8"))
    button6.place(x=200, y=235)
    button7=tk.Button(calculator_root, text="9", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("9"))
    button7.place(x=390, y=235)
    button8=tk.Button(calculator_root, text="-", width=3, height=1, font=("arial", 30, "bold"), bd=1,bg='#122534', fg='#00698f', command=lambda: show("-"))
    button8.place(x=530, y=235)

    button9=tk.Button(calculator_root, text="4", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("4"))
    button9.place(x=20, y=335)
    button0=tk.Button(calculator_root, text="5", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("5"))
    button0.place(x=200, y=335)
    button00=tk.Button(calculator_root, text="6", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("6"))
    button00.place(x=390, y=335)
    button11=tk.Button(calculator_root, text="+", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#122534', fg='#00698f', command=lambda: show("+"))
    button11.place(x=530, y=335)

    button12=tk.Button(calculator_root, text="1", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("1"))
    button12.place(x=20, y=435)
    button13=tk.Button(calculator_root, text="2", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("2"))
    button13.place(x=200, y=435)
    button14=tk.Button(calculator_root, text="3", width=3, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("3"))
    button14.place(x=390, y=435)
    button15=tk.Button(calculator_root, text="0", width=8, height=1, font=("arial", 30, "bold"), bd=1, bg='#d6e9ff', fg='#00698f', command=lambda: show("0"))
    button15.place(x=20, y=535)

    button16=tk.Button(calculator_root, text=".", width=3, height=1, font=("arial", 30, "bold"), bd=1,bg='#d6e9ff', fg='#00698f', command=lambda: show("."))
    button16.place(x=350, y=535)
    button17=tk.Button(calculator_root, text="=", width=3, height=2, font=("arial", 30, "bold"), bd=1,bg='#505050', fg='#00698f', command=lambda: calculate())
    button17.place(x=530, y=445)

def discount_calculator():
    calculator_root = tk.Toplevel(root)
    calculator_root.title("Discount Calculator")
    calculator_root.geometry("400x200+150+250")
    calculator_root.configure(bg='#0558ac')

    marked_price_label = tk.Label(calculator_root, text="Marked Price:", bg='#a8c6e0')
    marked_price_label.pack()
    marked_price_entry = tk.Entry(calculator_root)
    marked_price_entry.pack()

    discount_label = tk.Label(calculator_root, text="Discount (%):",bg='#a8c6e0')
    discount_label.pack()
    discount_entry = tk.Entry(calculator_root)
    discount_entry.pack()

    final_price_label = tk.Label(calculator_root, text="Final Price:",bg='#a8c6e0')
    final_price_label.pack()

    def calculate_final_price():
        marked_price = float(marked_price_entry.get())
        discount_percentage = float(discount_entry.get())
        discount = (discount_percentage / 100) * marked_price
        selling_price = marked_price - discount
        final_price_label.config(text=f"Final Price: {selling_price:.2f}")
        discount_label.config(text=f"Discount: {discount_percentage:.2f}%")

    calculate_button = tk.Button(calculator_root, text="Calculate", bg='#d6e9ff', command=calculate_final_price)
    calculate_button.pack()

root = tk.Tk()
root.title("Main Window")
root.geometry("200x200")
root.configure(bg='#0097e8')  # blue background

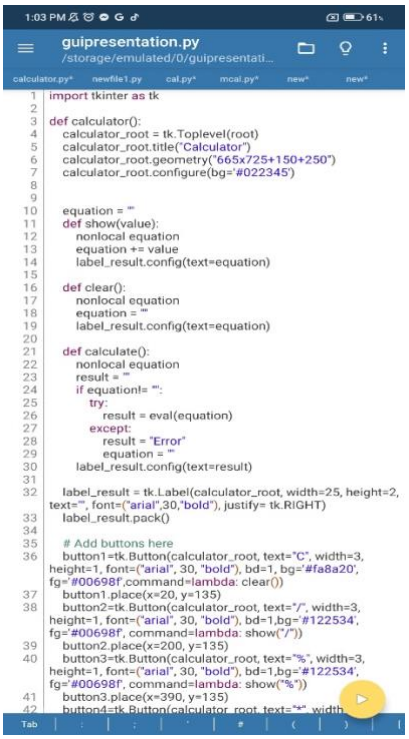
button2 = tk.Button(root, text="Discount Calculator", command=discount_calculator, bg='#ffcc00', fg='#00698f')  # light orange background and blue text
button2.pack(pady=10)

button = tk.Button(root, text="Calculator", command=calculator, bg='#33cc33', fg='#00698f')  # light green background and blue text
button.pack(pady=10)

quit_button = tk.Button(root, text="Quit", command=root.quit, bg='#ff9999', fg='#00698f')  # light red background and blue text
quit_button.pack(pady=10)

root.mainloop()
```

Screenshots:



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    discount_entry.pack()

    final_price_label = tk.Label(calculator_root, text='Final
Price:',bg='#a8c6e0')
    final_price_label.pack()

    def calculate_final_price():
        marked_price = float(marked_price_entry.get())
        discount_percentage = float(discount_entry.get())
        discount = (discount_percentage / 100) * marked_price
        selling_price = marked_price - discount
        final_price_label.config(text=f"Final Price: {selling_price:.
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# light orange background and blue text
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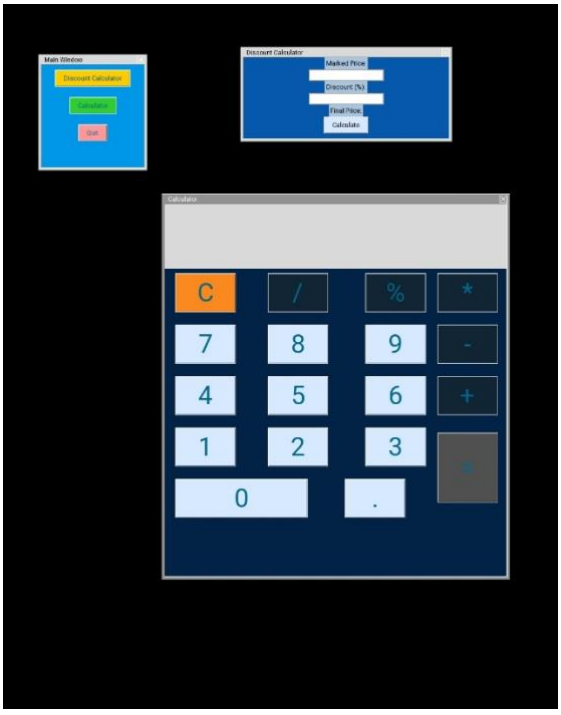
button = tk.Button(root, text="Calculator",
command=calculator, bg='#33cc33', fg='#00698f')  # light
green background and blue text
button.pack(pady=10)

quit_button = tk.Button(root, text="Quit", command=root.quit,
bg='#ff9999', fg='#00698f')  # light red background and blue
text
quit_button.pack(pady=10)

root.mainloop()
```



PERSONAL INFORMATION

Name: Kim C. Catay

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Date of Birth: 01/23/2004

Place of Birth: Surigao City

Address: Brgy, Canlanipa Surigao City

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Nationality: Filipino

Religion: Roman Catholic

Civil Status: Single

EDUCATIONAL BACKGROUND

Elementary: Canlanipa Central Elementary School
Brgy, Canlanipa Surigao City

Junior High School: Taft National High School
Brgy, Taft Surigao City

Senior High School:Taft National High School
Brgy, Taft Surigao City