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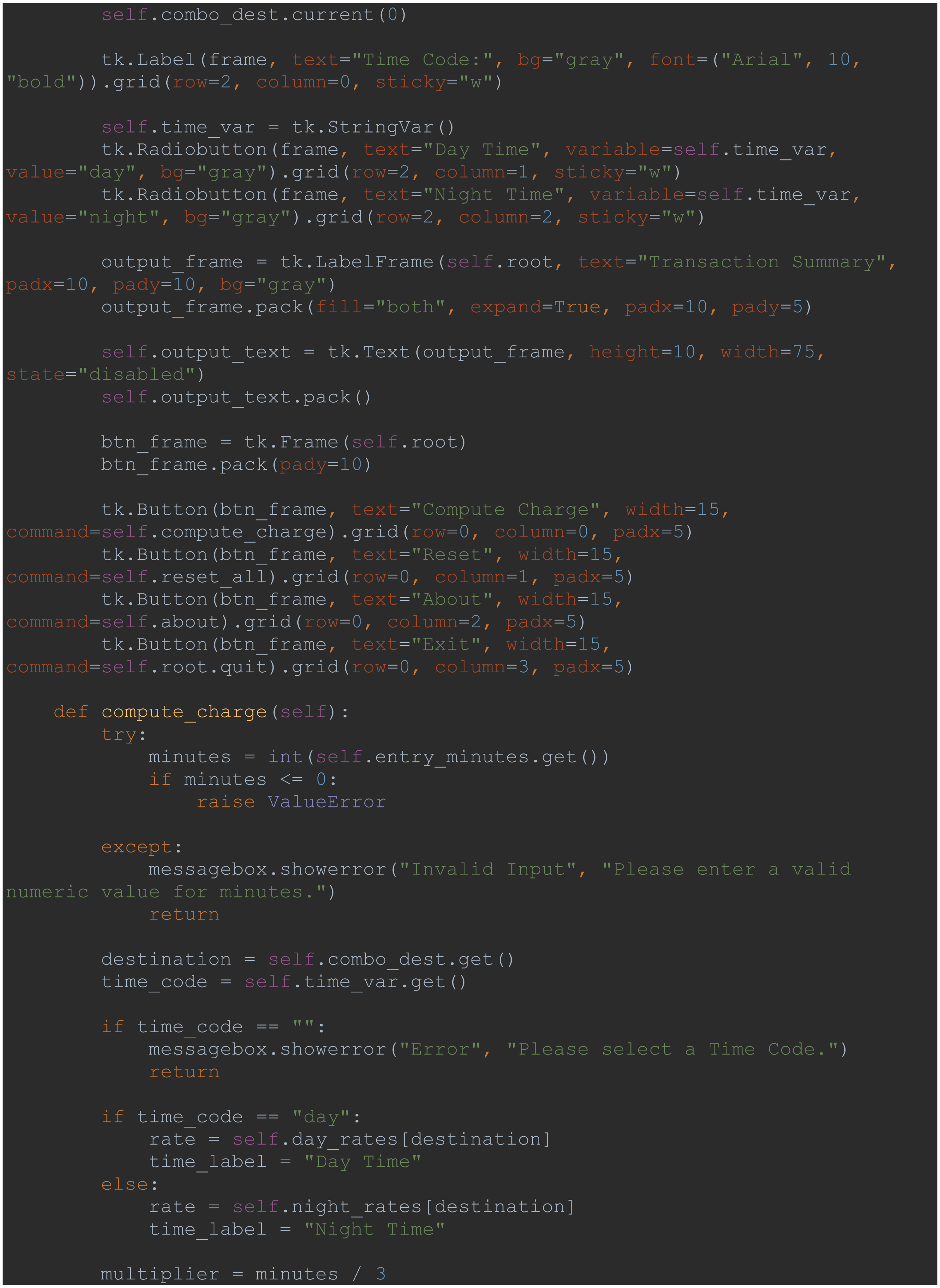
C204

Finals Task 4. Python and Tkinter GUI program

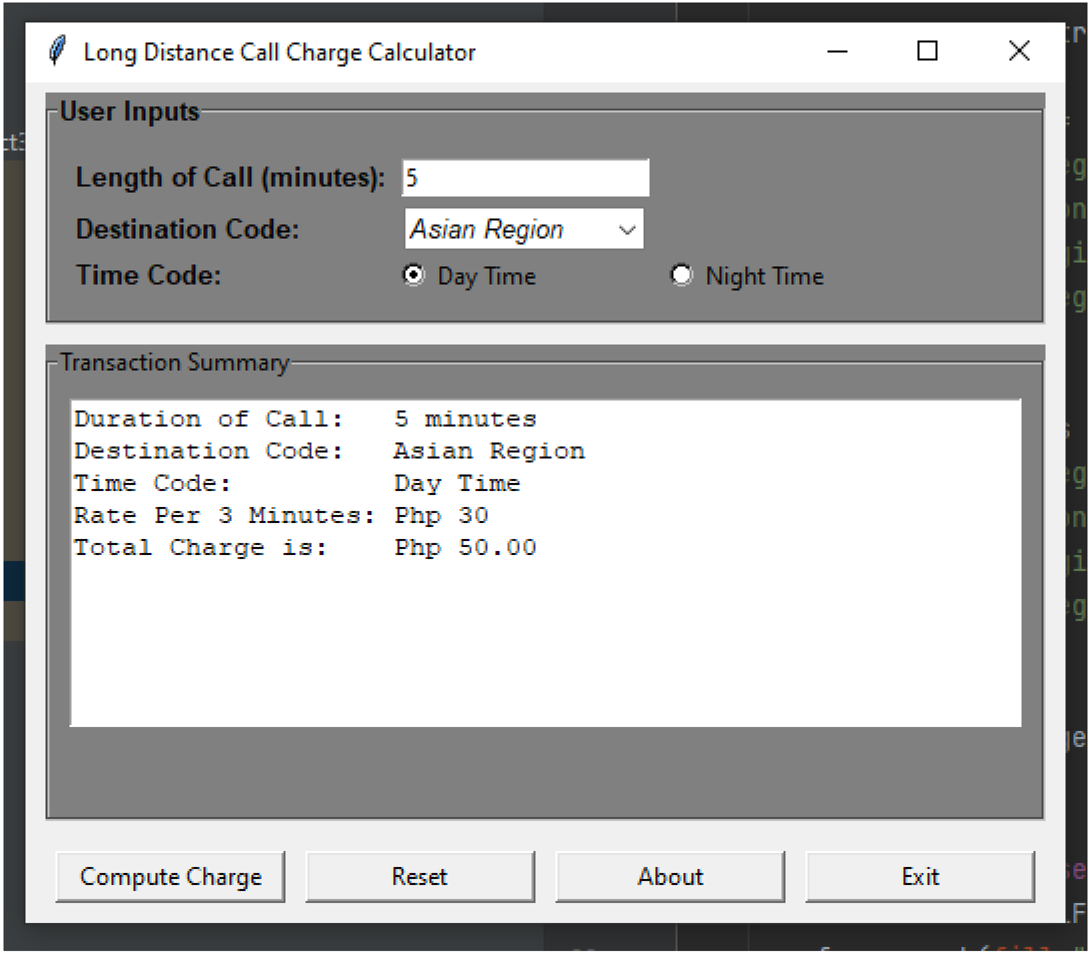
CODE

```
import tkinter as tk
from tkinter import ttk, messagebox

class LongDistanceApp:
    def __init__(self, root):
        self.root = root
        self.root.title("Long Distance Call Charge Calculator")
        self.root.geometry("520x420")

        self.day_rates = {
            "American Region": 50,
            "Asian Region": 30,
            "African Region": 40,
            "European Region": 35
        }

        self.night_rates = {
            "American Region": 45,
            "Asian Region": 27,
            "African Region": 36,
            "European Region": 30
        }

        self.create_widgets()

    def create_widgets(self):
        frame = tk.LabelFrame(self.root, text="User Inputs", padx=10,
pady=10, bg="gray", font=("Arial", 10, "bold"))
        frame.pack(fill="x", padx=10, pady=5)

        tk.Label(frame, text="Length of Call (minutes):", bg="gray",
font=("Arial", 10, "bold")).grid(row=0, column=0, sticky="w")
        self.entry_minutes = tk.Entry(frame, width=20)
        self.entry_minutes.grid(row=0, column=1, padx=5, pady=5)

        tk.Label(frame, text="Destination Code:", bg="gray", font=("Arial",
10, "bold")).grid(row=1, column=0, sticky="w")

        self.destinations = ["American Region", "Asian Region", "African
Region", "European Region"]
        self.combo_dest = ttk.Combobox(frame, values=self.destinations,
state="readonly", width=14, font=("Arial", 10, "italic"))
        self.combo_dest.grid(row=1, column=1, padx=5)
```



```
        self.combo_dest.current(0)

        tk.Label(frame, text="Time Code:", bg="gray", font=("Arial", 10,
"bold")).grid(row=2, column=0, sticky="w")

        self.time_var = tk.StringVar()
        tk.Radiobutton(frame, text="Day Time", variable=self.time_var,
value="day", bg="gray").grid(row=2, column=1, sticky="w")
        tk.Radiobutton(frame, text="Night Time", variable=self.time_var,
value="night", bg="gray").grid(row=2, column=2, sticky="w")

        output_frame = tk.LabelFrame(self.root, text="Transaction Summary",
padx=10, pady=10, bg="gray")
        output_frame.pack(fill="both", expand=True, padx=10, pady=5)

        self.output_text = tk.Text(output_frame, height=10, width=75,
state="disabled")
        self.output_text.pack()

        btn_frame = tk.Frame(self.root)
        btn_frame.pack(pady=10)

        tk.Button(btn_frame, text="Compute Charge", width=15,
command=self.compute_charge).grid(row=0, column=0, padx=5)
        tk.Button(btn_frame, text="Reset", width=15,
command=self.reset_all).grid(row=0, column=1, padx=5)
        tk.Button(btn_frame, text="About", width=15,
command=self.about).grid(row=0, column=2, padx=5)
        tk.Button(btn_frame, text="Exit", width=15,
command=self.root.quit).grid(row=0, column=3, padx=5)

    def compute_charge(self):
        try:
            minutes = int(self.entry_minutes.get())
            if minutes <= 0:
                raise ValueError

        except:
            messagebox.showerror("Invalid Input", "Please enter a valid
numeric value for minutes.")
            return

        destination = self.combo_dest.get()
        time_code = self.time_var.get()

        if time_code == "":
            messagebox.showerror("Error", "Please select a Time Code.")
            return

        if time_code == "day":
            rate = self.day_rates[destination]
            time_label = "Day Time"
        else:
            rate = self.night_rates[destination]
            time_label = "Night Time"

        multiplier = minutes / 3
        total_charge = multiplier * rate

        self.output_text.config(state="normal")
        self.output_text.delete("1.0", "end")
        self.output_text.insert("end", f"Duration of Call:   {minutes}
minutes\n")
        self.output_text.insert("end", f"Destination Code:
{destination}\n")
        self.output_text.insert("end", f"Time Code:          {time_label}\n")
        self.output_text.insert("end", f"Rate Per 3 Minutes: Php {rate}\n")
        self.output_text.insert("end", f"Total Charge is:    Php
{total_charge:.2f}\n")
        self.output_text.config(state="disabled")

    def reset_all(self):
        self.entry_minutes.delete(0, "end")
        self.combo_dest.current(0)
        self.time_var.set("")
        self.output_text.config(state="normal")
        self.output_text.delete("1.0", "end")
        self.output_text.config(state="disabled")

    def about(self):
        messagebox.showinfo("About", "Hello, I'm Lexter G!")


root = tk.Tk()
app = LongDistanceApp(root)
root.mainloop()
```

Sample Output:



Long Distance Call Charge Calculator

User Inputs

Length of Call (minutes): 5

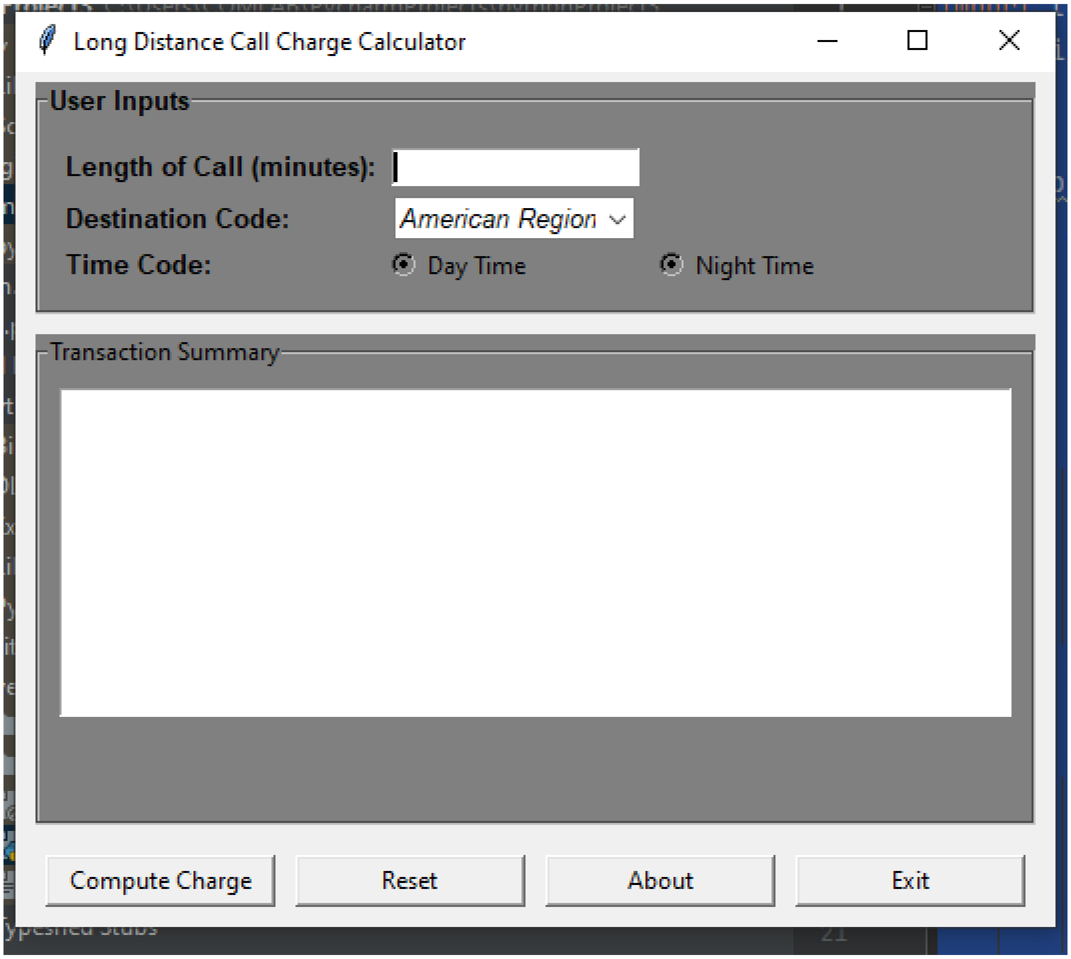
Destination Code: Asian Region

Time Code: ● Day Time ○ Night Time

Transaction Summary

```
Duration of Call:    5 minutes
Destination Code:    Asian Region
Time Code:           Day Time
Rate Per 3 Minutes:  Php 30
Total Charge is:     Php 50.00
```

Reset:



Long Distance Call Charge Calculator

User Inputs

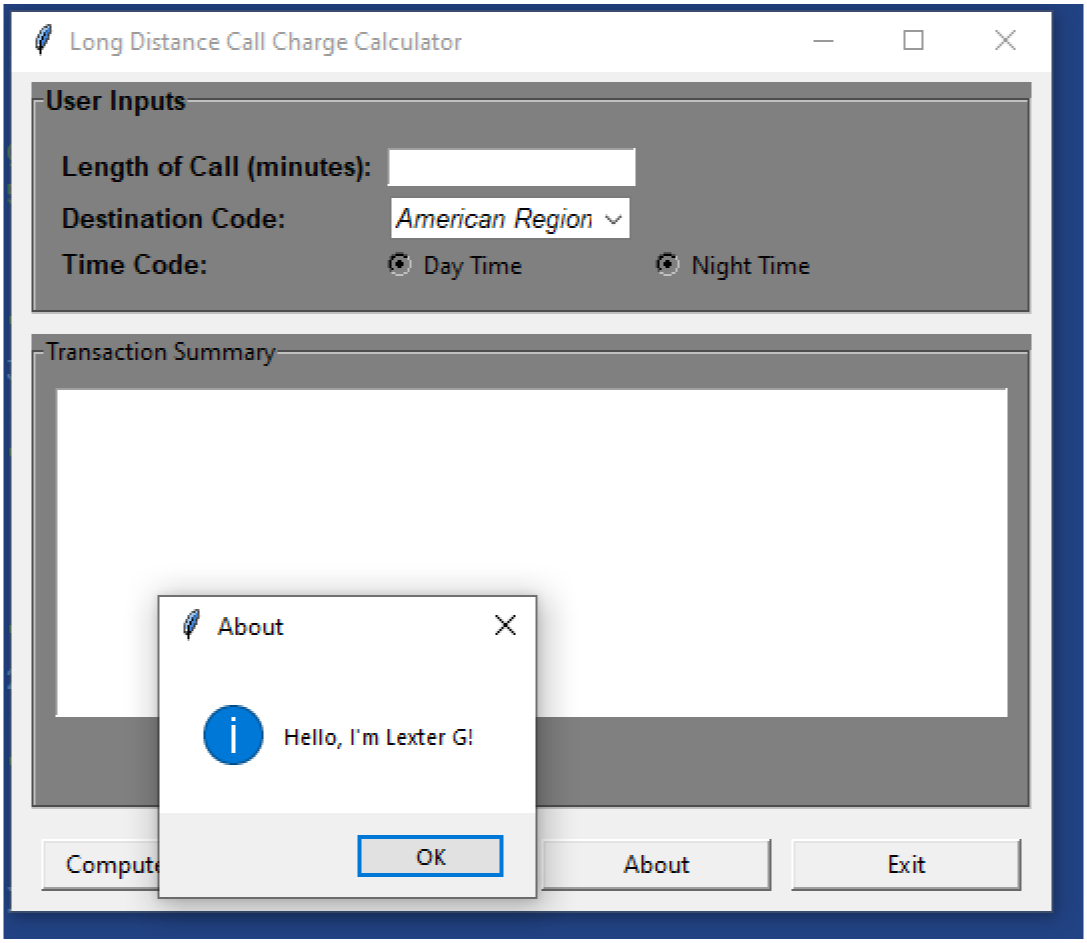
Length of Call (minutes):

Destination Code: American Region

Time Code: ● Day Time ● Night Time

Transaction Summary

About Me:



Long Distance Call Charge Calculator

User Inputs

Length of Call (minutes):

Destination Code: American Region

Time Code: ● Day Time ● Night Time

Transaction Summary

About

Hello, I'm Lexter G!