

Finals Lab Task 4. Python GUI using TKINTER

Source Code:

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import tkinter as tk
from tkinter import ttk, messagebox

# 1 usage
class LongDistanceGUI:
    def __init__(self, master):
        self.master = master
        self.master.title("Long Distance Call Charge Calculator")
        self.master.geometry("520x450")

        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_widget()

    def create_widget(self):
        frame = tk.LabelFrame(self.master, text="User Inputs:", relief='sunken', bg='#D3D3D3')
        frame.pack(padx=10, pady=10, fill="both")

        tk.Label(frame, text="Length of Call (in minutes):", bg='#D3D3D3').grid(row=0, column=2, pady=2)
        self.entry_minutes = tk.Entry(frame, width=21)
        self.entry_minutes.grid(row=0, column=3, pady=5)

        tk.Label(frame, text="Destination Code:", bg='#D3D3D3').grid(row=1, column=2, pady=5)
        self.dest_var = tk.StringVar()
        self.combo_dest = ttk.Combobox(frame, width=18, textvariable=self.dest_var, state="readonly")
        self.combo_dest['values'] = ("American Region", "Asian Region", "African Region", "European Region")
        self.combo_dest.grid(row=1, column=3, pady=5)
        self.combo_dest.current(0)

        tk.Label(frame, text="Time Code:", bg='#D3D3D3').grid(row=2, column=2, pady=5)
        self.time_var = tk.StringVar()
        tk.Radiobutton(frame, text="Day Time", variable=self.time_var, value="day", bg='#D3D3D3').grid(row=2, column=3,)
        tk.Radiobutton(frame, text="Night Time", variable=self.time_var, value="night", bg='#D3D3D3').grid(row=2, column=4,)
        self.time_var.set("day")

        self.output_frame = tk.LabelFrame(self.master, text="Transaction Summary: ")
        self.output_frame.pack(padx=10, pady=10, fill="both")

        self.lbl_summary = tk.Label(self.output_frame, justify="left", anchor="w")
        self.lbl_summary.pack(padx=10, pady=10)

        btn_frame = tk.Frame(self.master)
        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=10, command=self.reset_all).grid(row=0, column=1, padx=5)
        tk.Button(btn_frame, text="About", width=10, command=self.show_about).grid(row=0, column=2, padx=5)
        tk.Button(btn_frame, text="Close", width=10, command=self.master.quit).grid(row=0, column=3, padx=5)

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

    except ValueError:
        messagebox.showerror( title: "Invalid Input", message: "Please enter a valid positive number for minutes.")
        return

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

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

    charge = (minutes / 3) * rate

    summary_text = f"""
    Duration of Call:      {minutes} minutes\n
    Destination Code:     {destination}\n
    Time Code:            {time_display}\n
    Total Charge is:      Php {charge:.2f}"""

    self.lbl_summary.config(text=summary_text)

1 usage
def reset_all(self):
    self.entry_minutes.delete( first: 0, tk.END)
    self.combo_dest.current(0)
    self.time_var.set("day")
    self.lbl_summary.config(text="")

def show_about(self):
    messagebox.showinfo( title: "About", message: "Hello, I'm James Villar at your service.")

root = tk.Tk()
app = LongDistanceGUI(root)
root.mainloop()

```

Sample Output:

