

7OOP FINALS LAB TASK 4

I. PROBLEM

Instructions: READ AND UNDERSTAND THE PROBLEM FIRST BEFORE DOING THE ACTUAL PROGRAM.

1. Design the form below
2. Problem Statement: The cost of a long Distance call is based on the destination, the time of day the call was made, as well as the distance of the call. The rates as follows:

DAYTIME CALLS		NIGHTTIME CALLS	
1. American Region	P 50 every 3 minutes	1. American Region	P 45 every 3 minutes
2. Asian Region	P 30 every 2 minutes	2. Asian Region	P 27 every 2 minutes
3. African Region	P 40 every 3 minutes	3. African Region	P 36 every 3 minutes
4. European Region	P 35 every 2 minutes	4. European Region	P 30 every 2 minutes

3. Make a program that will Allow the user to **Select Destination Code (between 1 – 4)** using ComboBox widget, A Time Code using radio buttons, And the Duration Of The Call in minutes and output the **TOTAL CHARGE**. – Validate user inputs by using TRY EXCEPT block – Only numeric values are accepted.

4. Compute Button should compute for the **TOTAL CHARGE**.

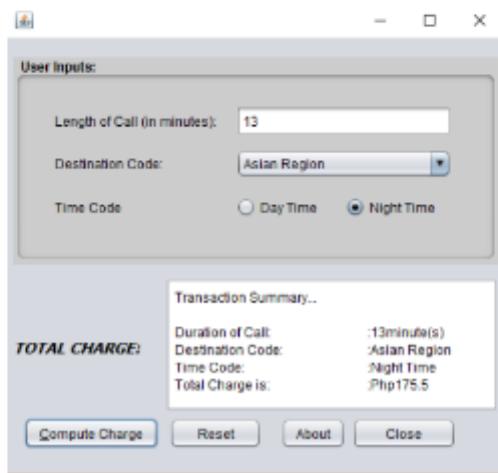
4.1 Computations should be based on the table rates shown above. (The total charge is based on **Length of Calls, Destination Code and Time Code**)

4.2. You may use the get () method of the comboBox to capture the selected option in your comboBox

5. Reset Button should clear the Radio Button Selection and the Text field entries should be cleared as well

6. About button should display a dialog with the message: "Hello I'm your Name"

7. See sample output below:



Rubrics: Form Design and Layout : 10 points

Program Correctness : 40 points (Reset – 5 pts., About – 5 pts. , Compute – 30 pts.)

II. SOURCE CODE

```
1 import tkinter as tk
2 from tkinter import messagebox
3
4 usage
5 def compute_total_charge():
6     try:
7         length_of_call = int(length_entry.get())
8         destination = destination_var.get()
9         time_of_day = time_var.get()
10
11         if length_of_call <= 0:
12             raise ValueError("Length of call must be a positive number")
13
14         rates = {
15             'American': {'Day': 50, 'Night': 15},
16             'Asian': {'Day': 40, 'Night': 27},
17             'African': {'Day': 45, 'Night': 30},
18             'European': {'Day': 35, 'Night': 20}
19         }
20
21         rate = rates[destination][time_of_day]
22
23         total_charge = (length_of_call / 3) * rate
24
25         result_label.config(text=f"Total Charge: P {total_charge:.2f}")
26     except ValueError as e:
27         messagebox.showerror(title="Invalid Input", message=f"Error: {e}")
28
29 usage
30 def reset_fields():
31     length_entry.delete(first=0, tk.END)
32     result_label.config(text="Total Charge: P 0.00")
33     destination_var.set("American")
34     time_var.set("Day")
35
36 usage
37 def show_about():
38     messagebox.showinfo(title="About", message="Hello! I'm Your Assistance.")
```

```
39
40 root = tk.Tk()
41 root.title("Long Distance Call Calculator")
42
43 tk.Label(root, text="Length of Call (in minutes)").pack()
44 length_entry = tk.Entry(root)
45 length_entry.pack()
46
47 destination_var = tk.StringVar(value="American")
48 tk.Label(root, text="Select Destination Code").pack()
49 destination_menu = tk.OptionMenu(root, destination_var, value="American", values="Asian", "African", "European")
50 destination_menu.pack()
51
52 time_var = tk.StringVar(value="Day")
53 tk.Label(root, text="Select Time of Day").pack()
54 daytime_button = tk.Radiobutton(root, text="Daytime", variable=time_var, value="Day")
55 nighttime_button = tk.Radiobutton(root, text="Nighttime", variable=time_var, value="Night")
56 daytime_button.pack()
57 nighttime_button.pack()
58
59 compute_button = tk.Button(root, text="Compute Total Charge", command=compute_total_charge)
60 compute_button.pack()
61
62 reset_button = tk.Button(root, text="Reset", command=reset_fields)
63 reset_button.pack()
64
65 about_button = tk.Button(root, text="About", command=show_about)
66 about_button.pack()
67
68 result_label = tk.Label(root, text="Total Charge: P 0.00")
69 result_label.pack()
70
71 root.mainloop()
```

III. SAMPLE OUTPUT

Long Distance Call Calculator

Length of Call (in minutes):
69

Select Destination Code:
Asian

Select Time of Day:
 Daytime
 Nighttime

Compute Total Charge

Reset
About

Total Charge: P 920.00

Long Distance Call Calculator

Length of Call (in minutes):
420

Select Destination Code:
African

Select Time of Day:
 Daytime
 Nighttime

Compute Total Charge

Reset
About

Total Charge: P 4200.00

Long Distance Call Calculator

Length of Call (in minutes):
80

Select Destination Code:
African

Select Time of Day:
 Daytime
 Nighttime

Compute Total Charge

Reset
About

Total Charge: P 1200.00

Long Distance Call Calculator

Length of Call (in minutes):
109

Select Destination Code:
European

Select Time of Day:
 Daytime
 Nighttime

Compute Total Charge

Reset
About

Total Charge: P 726.67

