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UNIVERSITI
TEKNOLOGI
MARA

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

UNIVERSITI TEKNOLOGI MARA

CAWANGAN KEDAH

DIPLOMA IN LIBRARY INFORMATICS (CDIM144)

PROGRAMMING FOR LIBRARIES (IML208)

“BEAUTY TREATMENT BOOKING DATABASE”

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SUBMISSION DATE

4TH JANUARY 2024

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Lastly, I would like to thank my loved ones and my family especially my beloved parents for always being supportive and keep motivating me to continue my work until the end.

1.0 INTRODUCTION

For my individual project for IML208 subject in my third semester, I am required to design and develop one simple computer interface which consists of Create and Read operations. Apart from that, I am also required to include simple calculations which is necessary and related to my database system. The purpose of a database system is to assist various individuals in ensuring their collected data is organized systematically and manage a large amount of data at once according to the capacity of the database. A computer interface database is highly crucial as it performs as a system or boundary that allows an interaction or communication between a computer or a program and a user. For this individual project, my chosen system that I created is a Beauty Management Database which functions to ease a company's work to calculate the total price of each treatment type chosen by users per pack. My developed system is a booking type of system that consists of Treatment A, which is body massage with the price of RM90, Treatment B is a facial treatment with the price of RM150 and the last one is Combo Treatment which consists of Treatment A + Treatment B + hair care with the price of RM240. The system works by starting with the customers choosing their beauty treatment type and they would input to the system their names, age, and contact numbers. The calculations involved in this system is to calculate the overall total price of treatment type chosen by customers per pack. The calculation in coding would be $\text{total_price} = \text{price}[\text{treatment_type}] * \text{packs}$. Lastly, the system would output to the customers their chosen treatment type, the number of packs and the total price.

2.0 BEAUTY TREATMENT BOOKING FLOWCHART

This is the flowchart that guides the flow of customers input their data to be inserted into the database. This flowchart also shows the calculation to get the total price of the treatment type per packs. The system outputs the treatment type, the number of packs and the total price.

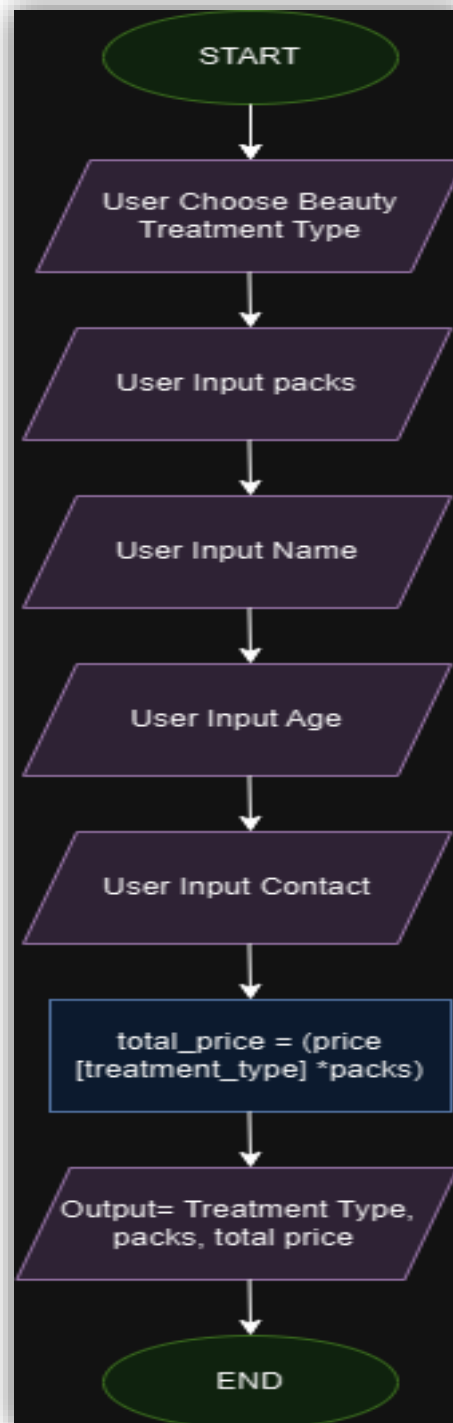
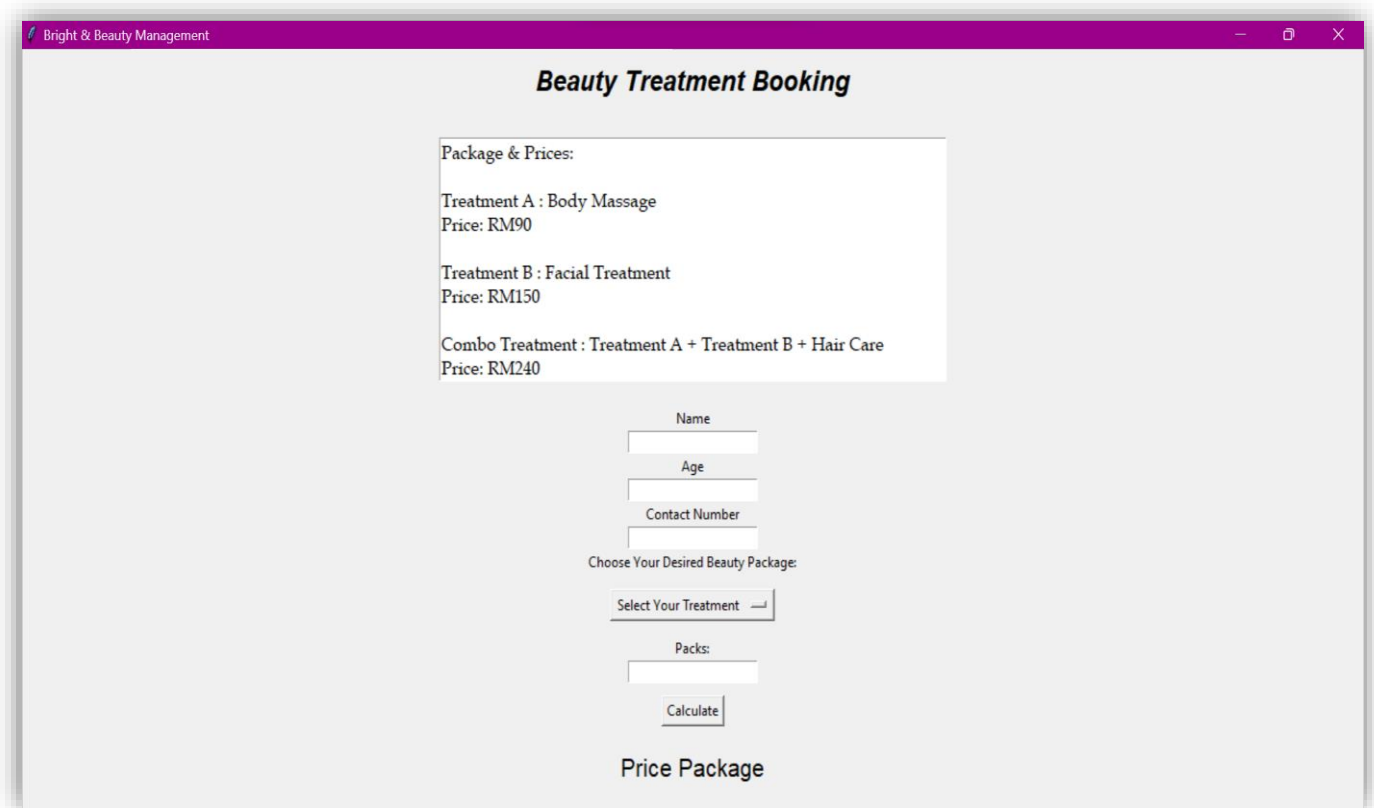


Figure 1: Flowchart on Beauty Treatment Booking Database

3.0 GRAPHICAL USER INTERFACE (GUI)

This is the Graphical user interface (GUI) that appears and executed when the code runs that I prepare for the customers of Beauty Treatment Booking System to fill in their information to be saved and collected in the database.



The screenshot shows a window titled "Bright & Beauty Management" with a purple header bar. The main content area is titled "Beauty Treatment Booking". It features a box on the left listing "Package & Prices" with three options: "Treatment A : Body Massage" (RM90), "Treatment B : Facial Treatment" (RM150), and "Combo Treatment : Treatment A + Treatment B + Hair Care" (RM240). To the right of this box are input fields for "Name", "Age", and "Contact Number". Below these is a label "Choose Your Desired Beauty Package:" followed by a dropdown menu labeled "Select Your Treatment". Further down is a "Packs:" label with an input field and a "Calculate" button. At the bottom, the text "Price Package" is displayed.

Package & Prices:
Treatment A : Body Massage Price: RM90
Treatment B : Facial Treatment Price: RM150
Combo Treatment : Treatment A + Treatment B + Hair Care Price: RM240

Name

Age

Contact Number

Choose Your Desired Beauty Package:

Select Your Treatment

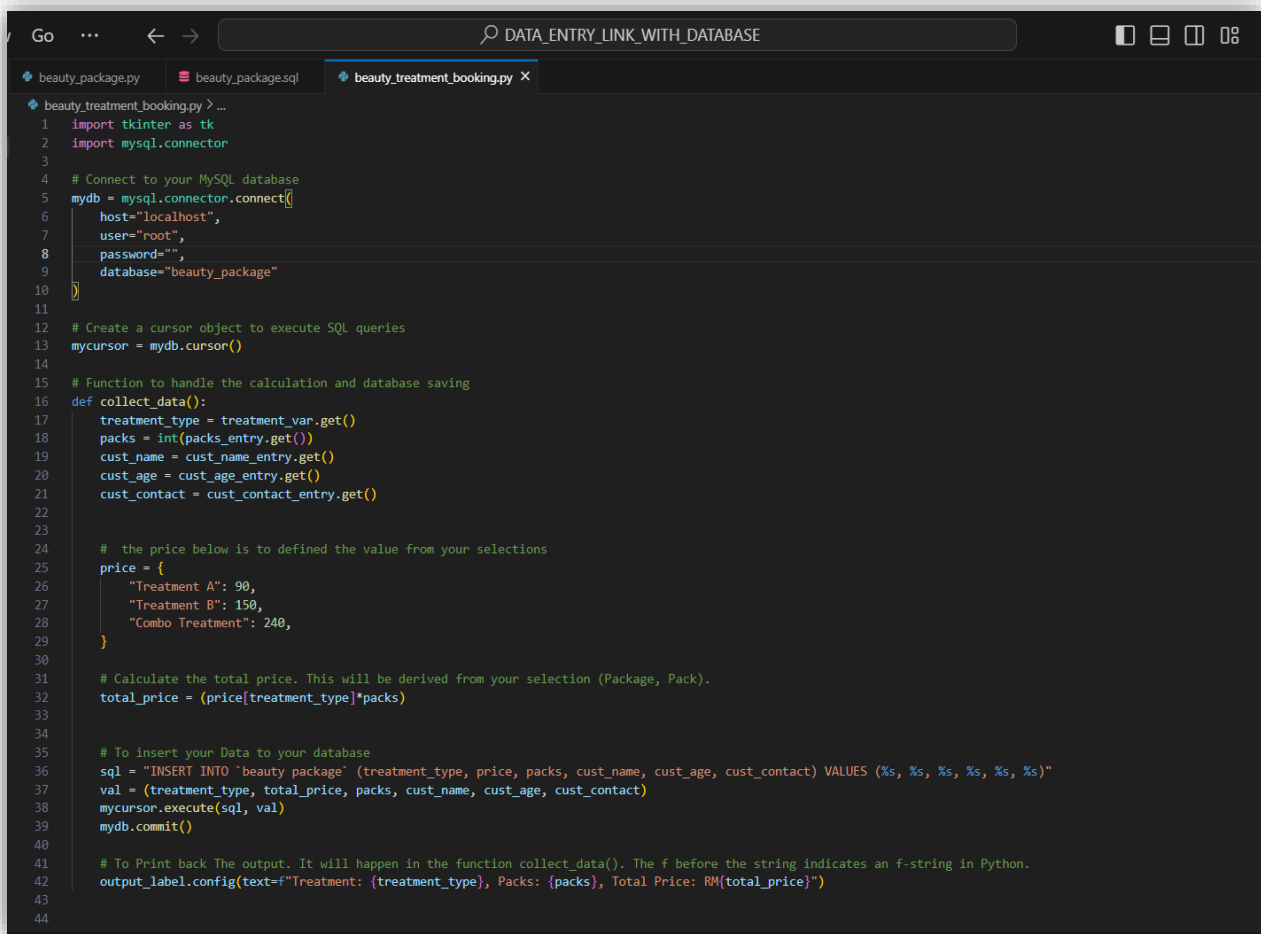
Packs:

Price Package

Figure 2: Graphical User Interface (GUI) of Bright & Beauty Management

4.0 PYTHON CODE

This is the python code that I prepared for succeeding and executing my chosen database system which is Beauty Treatment Booking Database to connect to a database. It is required for the coding process to relate to XAMPP as an activator to connect the codes to the database to ensure that the customer's data are recorded and stored in the system according to their data entries.



```
Go ... DATA_ENTRY_LINK_WITH_DATABASE
beauty_package.py beauty_packagesql beauty_treatment_booking.py X
1 import tkinter as tk
2 import mysql.connector
3
4 # Connect to your MySQL database
5 mydb = mysql.connector.connect(
6     host="localhost",
7     user="root",
8     password="",
9     database="beauty_package"
10 )
11
12 # Create a cursor object to execute SQL queries
13 mycursor = mydb.cursor()
14
15 # Function to handle the calculation and database saving
16 def collect_data():
17     treatment_type = treatment_var.get()
18     packs = int(packs_entry.get())
19     cust_name = cust_name_entry.get()
20     cust_age = cust_age_entry.get()
21     cust_contact = cust_contact_entry.get()
22
23
24 # the price below is to defined the value from your selections
25 price = {
26     "Treatment A": 90,
27     "Treatment B": 150,
28     "Combo Treatment": 240,
29 }
30
31 # Calculate the total price. This will be derived from your selection (Package, Pack).
32 total_price = (price[treatment_type]*packs)
33
34
35 # To insert your Data to your database
36 sql = "INSERT INTO `beauty package` (treatment_type, price, packs, cust_name, cust_age, cust_contact) VALUES (%s, %s, %s, %s, %s, %s)"
37 val = (treatment_type, total_price, packs, cust_name, cust_age, cust_contact)
38 mycursor.execute(sql, val)
39 mydb.commit()
40
41 # To Print back The output. It will happen in the function collect_data(). The f before the string indicates an f-string in Python.
42 output_label.config(text=f"Treatment: {treatment_type}, Packs: {packs}, Total Price: RM{total_price}")
43
44
```

Figure 3: Python code of Beauty Treatment Booking System

```

Go ... < -> DATA_ENTRY_LINK_WITH_DATABASE
beauty_package.py beauty_package.sql beauty_treatment_booking.py X
beauty_treatment_booking.py > ...
43
44
45 # Your Main window, You need to have the title, geometry (MUST)
46 root = tk.Tk()
47 root.title("Bright & Beauty Management")
48 root.geometry('500x950')
49
50
51 # Page Title
52 label = tk.Label(root, text='Beauty Treatment Booking', font=("Times New Romans",18, "bold", "italic"))
53 label.pack(ipadx=10, ipady=10)
54
55 # Prices List by using textbox
56 prices_text = tk.Text(root, height=10, width=60, font= ("book antiqua", 12))
57 prices_text.pack(pady=20)
58
59 # The defined list by using pricebox
60 prices_text.insert(tk.END, "Package & Prices:\n\n")
61 prices_text.insert(tk.END, "Treatment A : Body Massage \nPrice: RM90\n\n")
62 prices_text.insert(tk.END, "Treatment B : Facial Treatment \nPrice: RM150\n\n")
63 prices_text.insert(tk.END, "Combo Treatment : Treatment A + Treatment B + Hair Care \nPrice: RM240 \n\n")
64 prices_text.configure(state='disabled')
65
66 #Save Customer Info
67 cust_name_label = tk.Label(root, text="Name")
68 cust_name_label.pack()
69 cust_name_entry = tk.Entry(root)
70 cust_name_entry.pack()
71
72 cust_age_label = tk.Label(root, text="Age")
73 cust_age_label.pack()
74 cust_age_entry = tk.Entry(root)
75 cust_age_entry.pack()
76
77 cust_contact_label = tk.Label(root, text="Contact Number")
78 cust_contact_label.pack()
79 cust_contact_entry = tk.Entry(root)
80 cust_contact_entry.pack()
81
82
83 # Treatment Type Dropdown (Label)
84 treatment_label = tk.Label(root, text="Choose Your Desired Beauty Package:")
85 treatment_label.pack()
86

```

Figure 4: Python code of Beauty Treatment Booking System

```

Go ... < -> DATA_ENTRY_LINK_WITH_DATABASE
beauty_package.py beauty_package.sql beauty_treatment_booking.py X
beauty_treatment_booking.py > ...
86
87 # Treatment Type Dropdown
88 treatment_var = tk.StringVar(root)
89 treatment_var.set("Select Your Treatment") # Default value before your selection
90 treatment_dropdown = tk.OptionMenu(root, treatment_var, "Treatment A", "Treatment B", "Combo Treatment")
91 treatment_dropdown.pack(pady=10)
92
93 # Packs Entry. Label and user can insert data thru entry
94 packs_label = tk.Label(root, text="Packs:")
95 packs_label.pack()
96 packs_entry = tk.Entry(root)
97 packs_entry.pack()
98
99 # Save Button
100 save_button = tk.Button(root, text="Calculate", command=collect_data)
101 save_button.pack(pady=10)
102
103 # Output Label & result
104 label = tk.Label(root, text='Price Package', font=("Times New Romans",16))
105 label.pack(ipadx=10, ipady=10)
106 output_label = tk.Label(root, text="")
107 output_label.pack()
108
109 root.mainloop()
110

```

Figure 5: Python code of Beauty Treatment Booking System

5.0 DATABASE FROM XAMPP

This is the resulted database from the Python codes that I prepared that consists of the attributes of the system, which is treatment type, the price and packs, customer's name, age, and contact numbers. Figure 6 shows the recorded information filled by customers in the GUI.

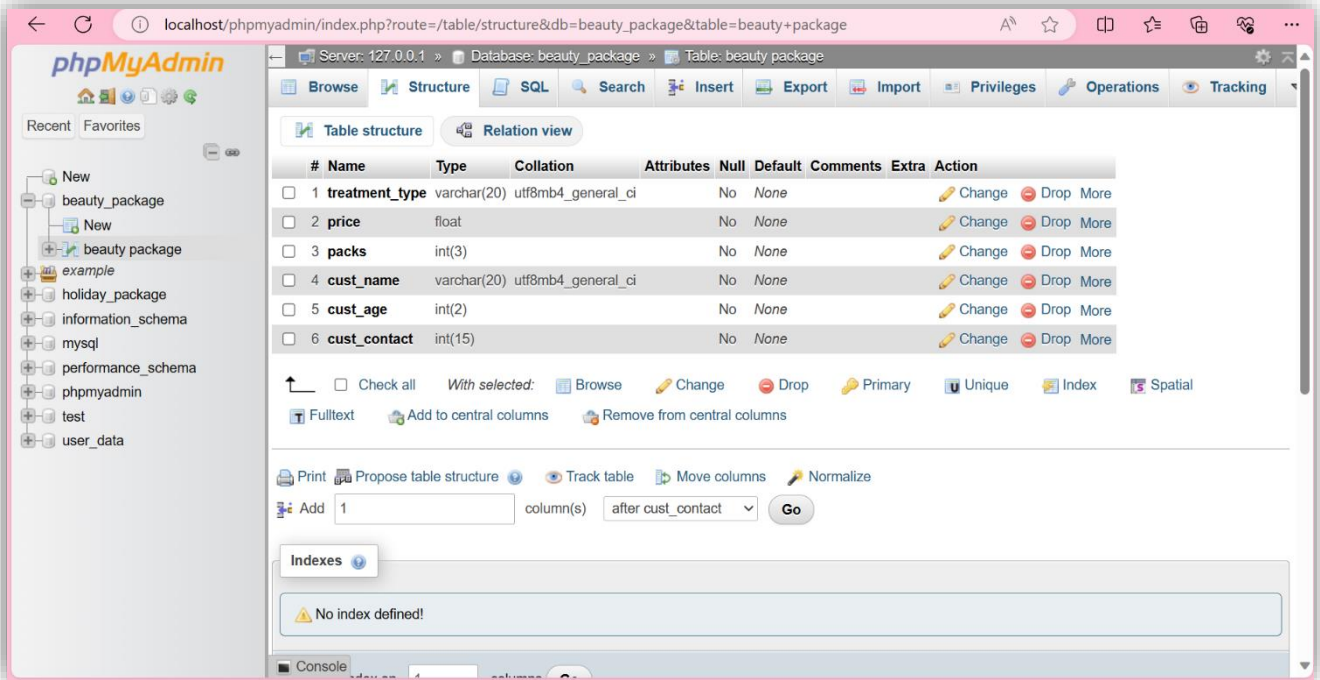


Figure 6: Structure area of SQL Database

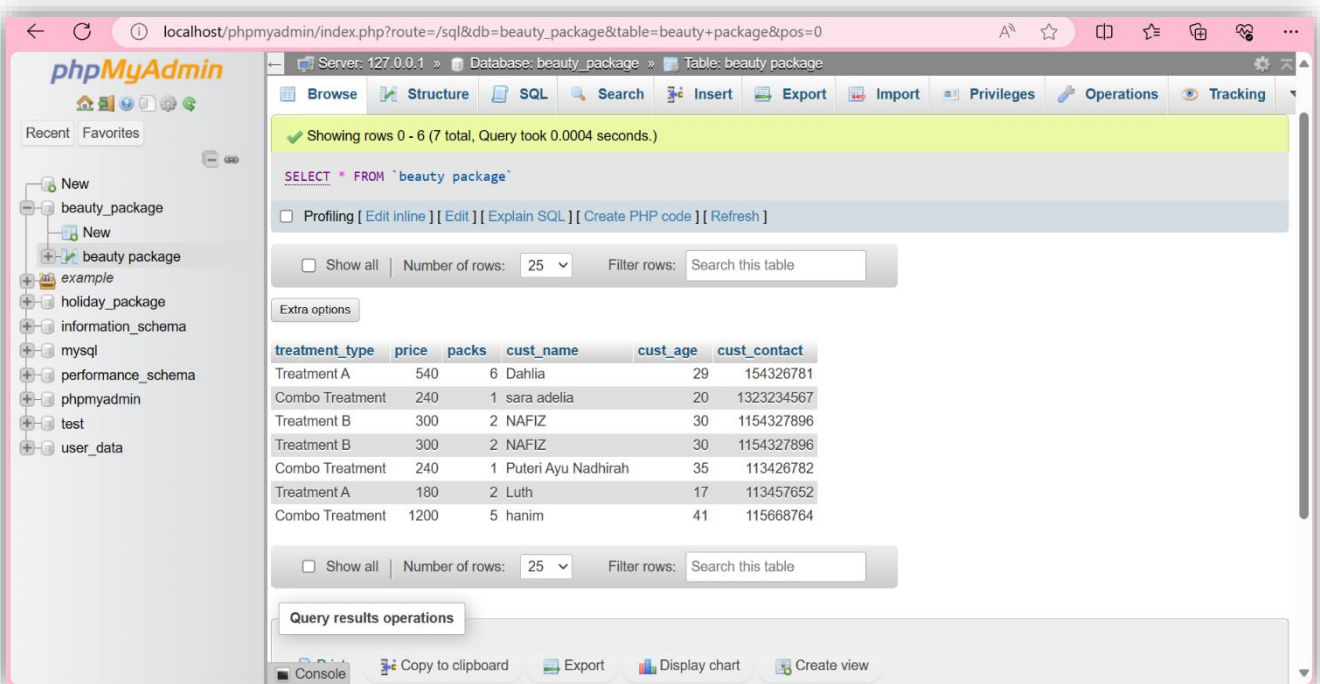


Figure 7: Customers data transferred from GUI filled by customers

6.0 CONCLUSION

Completing this technical project has made me come into conclusions and lead me to a deeper understanding on the importance of a flowchart to let us see the flow clearly. Things that I learned from executing codes or coding in Python is that a lot of things need to be explored to perform and be able to do coding according to its multiple rules and formats. For instance, exploring various type of coding methods to improve my coding skills instead of copying and pasting from other websites and trying and error until succeed. Moreover, from this individual project I also learned on how to create a database to ensure a platform for users to record and store their data through Graphical User Interface (GUI). Apart from that, I also learned to create five attributes to relate them to my coding and generate the calculation results. Last but not least, I do think that programming or coding subject is highly complicated to understand as it requires an abundance of technical skills and knowledge by self-exploring. However, I am glad that I got this opportunity and chance to learn programming subject and understand the bright side of it which is to assist people to ease their burdens by simplifying and instantly provide people with solutions to their problems.

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