COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

UNIVERSITI TEKNOLOGI MARA

MERBOK, KEDAH

DIPLOMA IN LIBRARY INFORMATICS

(IM144)

PROGRAMMING FOR LIBRARIES

(IML208)

INDIVIDUAL PROJECT: REPORT

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SUBMISSION DATE:

4th JAN 2024

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ACKNOWLEDGEMENT

Assalamualaikum, warahmatullahi wabarakatuh.

Salam UiTM Dihatiku.

First and foremost, I would like to give never-ending praises to Allah, The All Mighty, for having blessed me with the ability and good health to complete this individual report. Special thanks to my lecturer for IML 208, Sir Airul Shazwan Bin Norshahimi, whose guidance and moral support have been major keys throughout my journey in finishing this portfolio. His invaluable contributions carried me through all the stages of writing my projects. I could not have undertaken this journey without my parents and siblings, to whom I am deeply indebted; their love and appreciation for my studies keep me going through tough times. Your prayers for me have sustained me this far without wanting to give it all up. Words can never express my gratitude enough to all of you mentioned above.

Second, my deepest appreciation goes to my dearest roommates, who have given me all they can for putting up with me even at my absolute worst and never doubting me even once. Despite all the pressures we have on our shoulders, you have never stopped being my helping hand.

Thank you so much. My only hope for this portfolio is that it will soon be helpful, no matter how big or small.

TABLE OF CONTENT

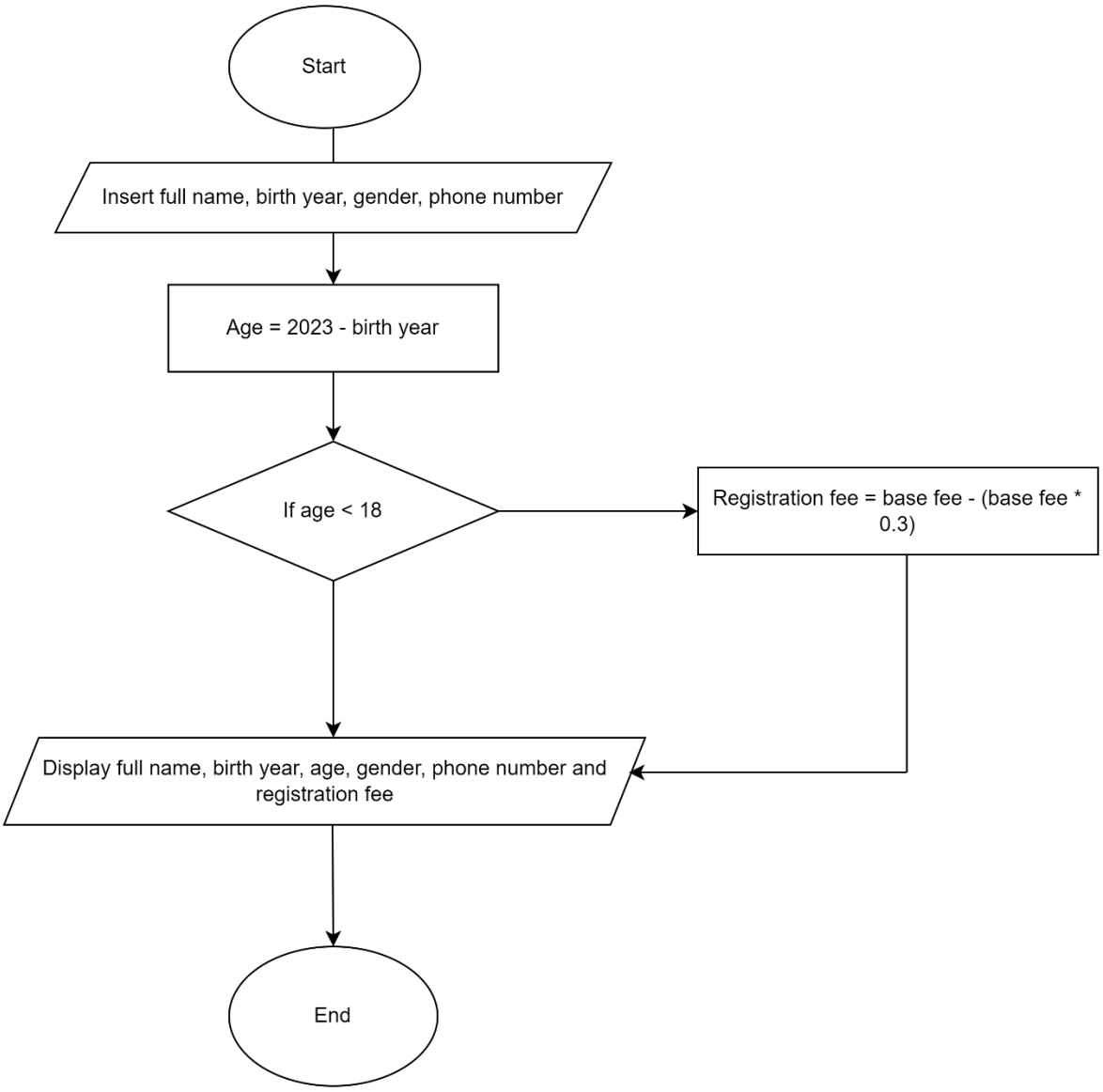
1.0 INTRODUCTION

For my individual assignment, I made a simple registration system for a diving center that serves as a user-friendly interface for both administrators and new divers. There are 6 attributes involved, which are full name, birth year, age, gender, phone number, and annual registration fee. Users need to insert their full name for identification purposes, and their birth year to determine whether they are eligible for discounts or not, which will be generated by subtracting their birth year from the year 2023. Then, users will have to insert their gender, and phone number.

I included a formula that calculates new members' ages from the birth year data they have entered. For those whose ages are generated to be 18 and below, they will get a 30% discount from the annual fee of RM300. The output will consist of their full name, birth year, age, gender, phone number, and registration fee.

These data will be saved into MySQL database named 'Diving Center', specifically into a table named members, which is hosted by PhpMyAdmin.

2.0 FLOWCHART



3.0 SNAPSHOTS OF PYTHON CODE

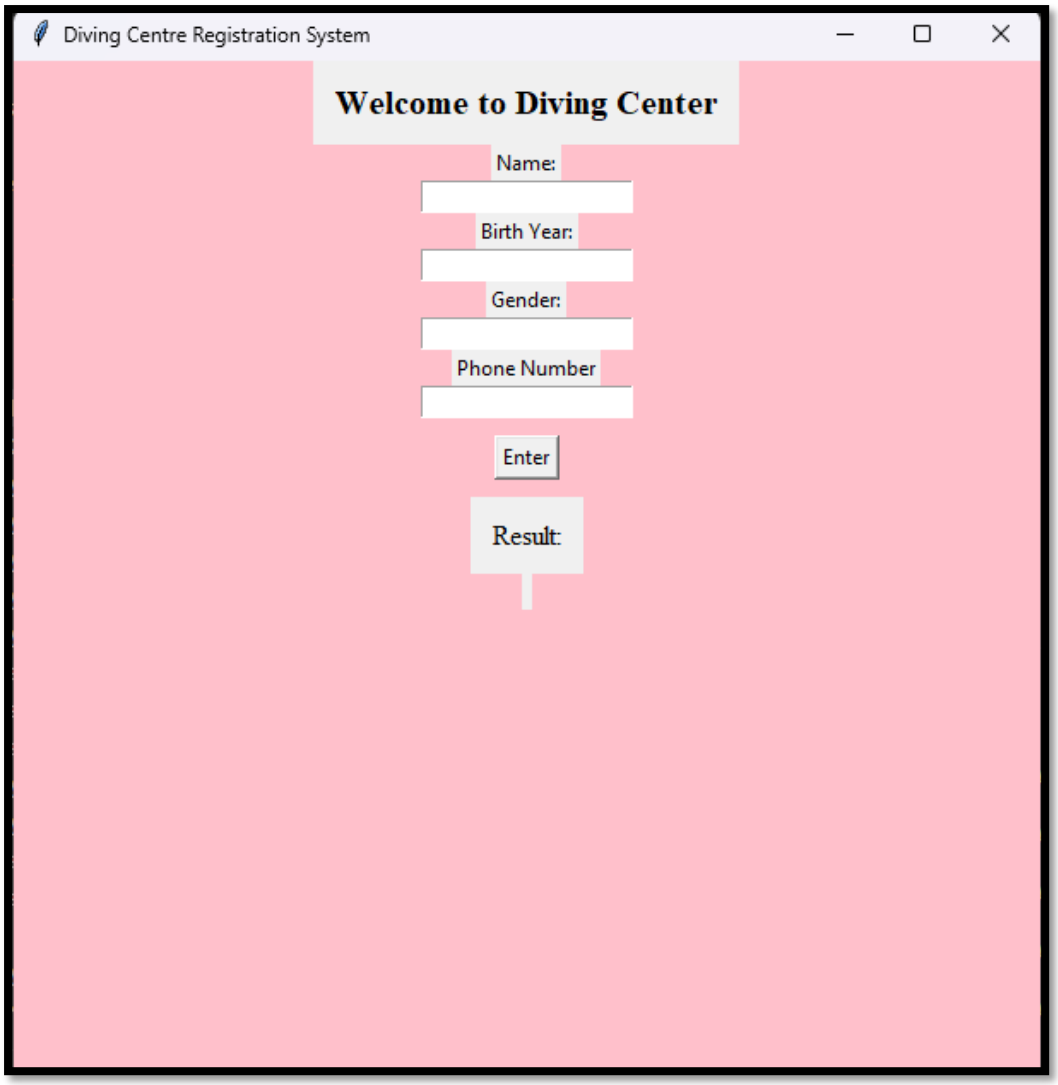
individual_assignment.py > collect_data

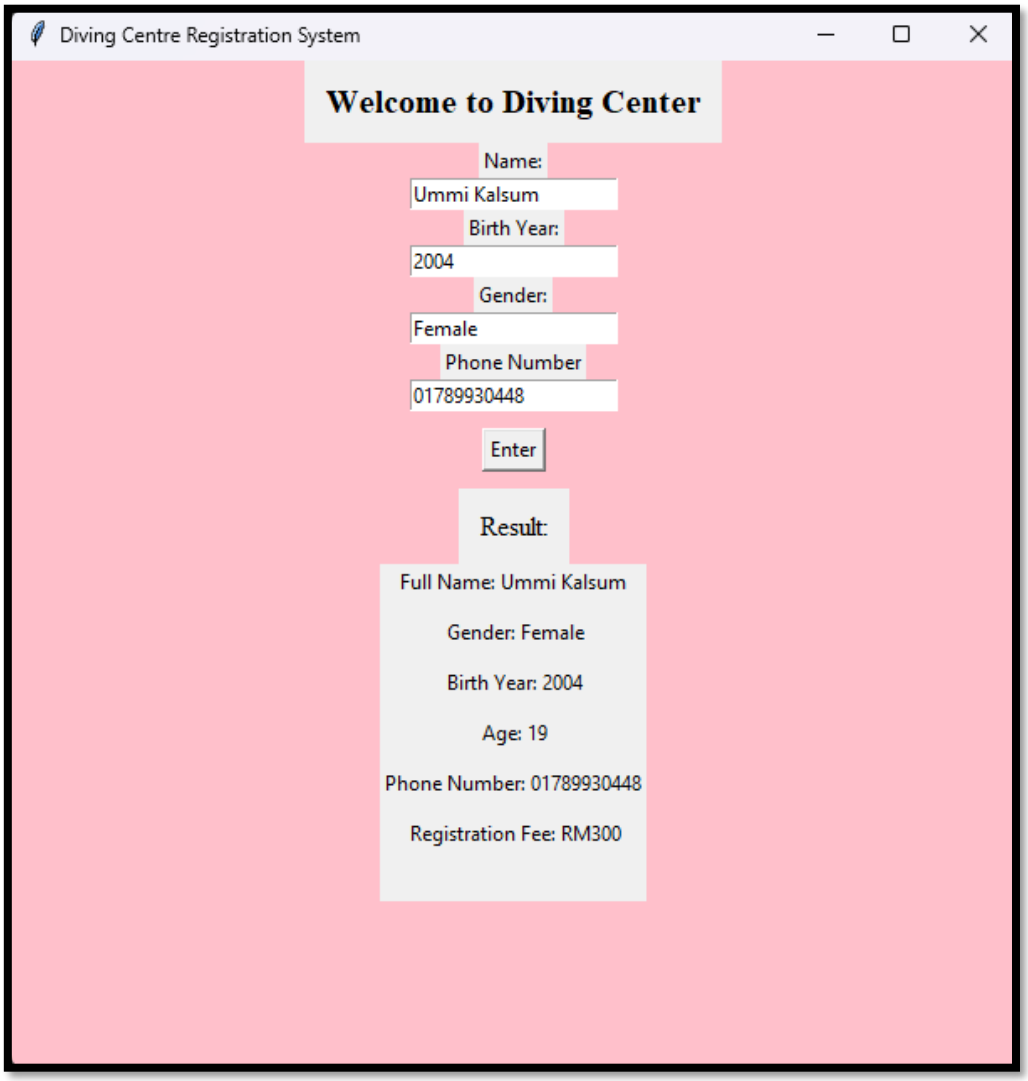
```python
import tkinter as tk
import mysql.connector

# Connect to your MySQL database
mydb = mysql.connector.connect(
    host="localhost",
    user="root",
    password="",
    database="diving_center"
)

# Create a cursor object to execute SQL queries
mycursor = mydb.cursor()

# Function to calculate age based on birthdate
def calculate_age(birthyear):
    current_year = 2023
    age = current_year - int(birthyear)
    return age

# Function to insert data into the table
def collect_data():
    name = full_name_entry.get()
    birthyear = birthyear_entry.get()
    gender = gender_entry.get()
    phone_number = phone_number_entry.get()


    # Calculate age based on birthdate
    age = calculate_age(birthyear)

    # Apply discount if the person is under 18
```

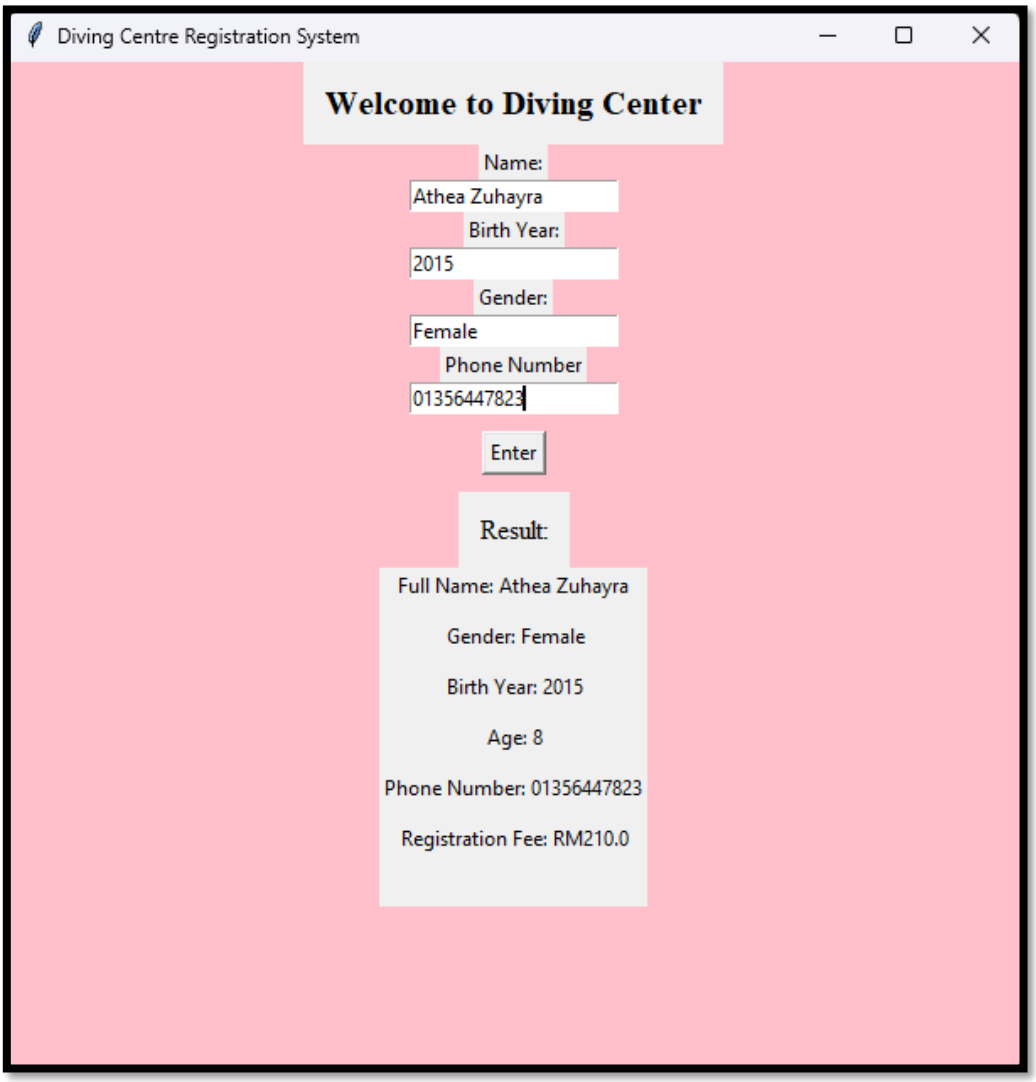
```python
    # Apply discount if the person is under 18
    discount_percentage = 0.3 if age < 18 else 0

    # Calculate registration fee
    base_fee = 300
    registration_fee = base_fee - (base_fee * discount_percentage)

    # Insert data into the database
    sql = "INSERT INTO members (Full_Name, Gender, Birth_Year, Age, Phone_Number, Fee) VALUES (%s, %s, %s, %s, %s, %s)"
    val = (name, gender, birthyear, age, phone_number, registration_fee)
    mycursor.execute(sql, val)
    mydb.commit()

    # Display the result
    output_label.config(text=f"Full Name: {name}\n\n Gender: {gender}\n\n Birth Year: {birthyear}\n\n Age: {age}\n\n"
                             f"Phone Number: {phone_number}\n\n Registration Fee: RM{registration_fee}\n\n")

# Tkinter GUI
root = tk.Tk()
root.title("Diving Centre Registration System")
root.geometry("600x600")
root.configure(bg="pink")

# Page Title
label = tk.Label(root, text='Welcome to Diving Center', font=("Times New Roman", 15, "bold"))
label.pack(ipadx=10, ipady=10)

label_full_name = tk.Label(root, text="Name:")
label_full_name.pack()
full_name_entry = tk.Entry(root)
full_name_entry.pack()
```

```
label_birthyear = tk.Label(root, text="Birth Year:")
label_birthyear.pack()
birthyear_entry = tk.Entry(root)
birthyear_entry.pack()

label_gender = tk.Label(root, text="Gender:")
label_gender.pack()
gender_entry = tk.Entry(root)
gender_entry.pack()

label_phone_number = tk.Label(root, text="Phone Number")
label_phone_number.pack()
phone_number_entry = tk.Entry(root)
phone_number_entry.pack()


# Buttons to perform operations
# Save Button
save_button = tk.Button(root, text="Enter", command=collect_data)
save_button.pack(pady=10)

# Output Label & result
label = tk.Label(root, text='Result:', font=("Times New Roman", 12))
label.pack(ipadx=10, ipady=10)
output_label = tk.Label(root, text="")
output_label.pack()

root.mainloop()

```

4.0 SNAPSHOTS OF GUI (GRAPHIC USER INTERFACE)




Diving Centre Registration System
Welcome to Diving Center
Name:
Ummi Kalsum
Birth Year:
2004
Gender:
Female
Phone Number
01789930448
Enter
Result:
Full Name: Ummi Kalsum
Gender: Female
Birth Year: 2004
Age: 19
Phone Number: 01789930448
Registration Fee: RM300


Diving Centre Registration System
Welcome to Diving Center
Name:
Athea Zuhayra
Birth Year:
2015
Gender:
Female
Phone Number
01356447823
Enter
Result:
Full Name: Athea Zuhayra
Gender: Female
Birth Year: 2015
Age: 8
Phone Number: 01356447823
Registration Fee: RM210.0

5.0 SNAPSHOTS OF DATABASE