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DIPLOMA IN LIBRARY INFORMATICS (CDIM144)
IML208: PROGRAMMING FOR LIBRARIES

INDIVIDUAL ASSIGNMENT:
“BOOKSHOP MEMBERSHIP REGISTRATION SYSTEM”

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1.0 INTRODUCTION

To start, 'Kinokunlra Membership Registration' is a bookstore membership registration system that is user-friendly and is created using tkinter with graphical user interface (GUI). In terms of functionality, the system covers key aspects of membership management, such as user registration and data storage. Leveraging the capabilities of Python, particularly with the tkinter library for GUI development, the application offers an intuitive platform for users to interact with. In addition, the backbone of the system lies in its integration with the database 'phpMyAdmin', that handles the storage and retrieval of membership information.

This database will have the user input their name, date of birth, email, and phone number. However, the output will have the name of the user, age, email address, and phone number. The calculation involved in the code is the calculation of the user's age.

To add, this database will only involve the functions of Create and Read.

In consideration of the user, the system also provides a help button in which the user will get a message box on the instructions on how to enter their information.

Lastly, after the user enters their information, they can click on the 'Register' button. If they are done or maybe want to cancel their registration, they can just click on the 'Quit application' button to quit the application.

2.0 FLOWCHART

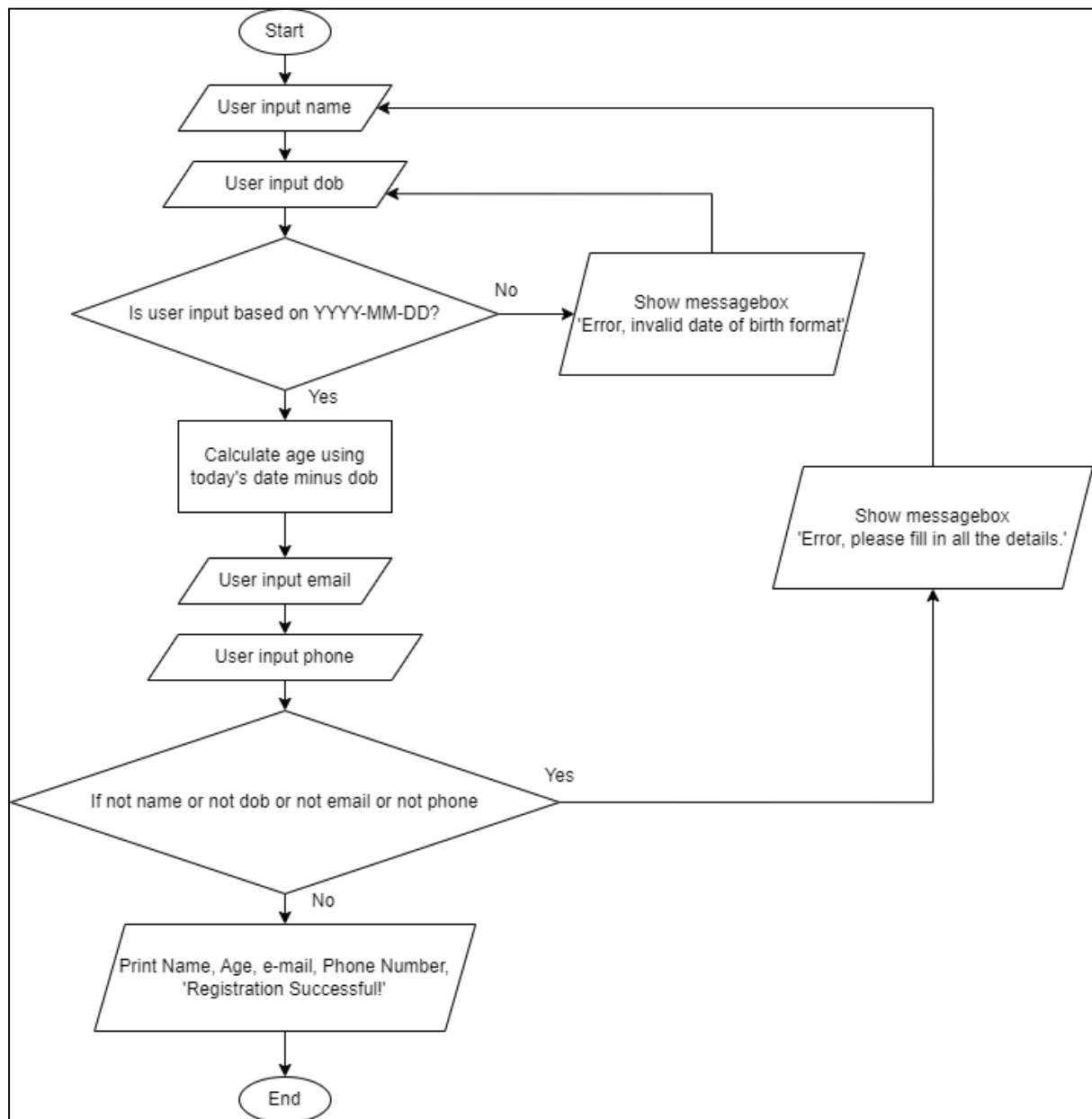


Figure 1.0 Flowchart of “Kinokunlra” bookshop membership registration system

3.0 SCREENSHOTS

3.1 CODING

```
Ira_Membership.py > show_help
1  import tkinter as tk
2  from tkinter import messagebox
3  from datetime import date
4  import mysql.connector
5
6  def show_help():
7      help_text = """
8      Welcome to KinokunIra Membership Registration!
9
10     Please fill in the following information:
11     - Name: Your full name.
12     - Date of Birth (YYYY-MM-DD): Your date of birth in the specified format.
13     - Email (xxx@xxx.xxx): Your email address.
14     - Phone number (+60 only): Your phone number, which must start with '60', as this membership is only valid for Malaysians.
15
16     After filling in the details, click the 'Register' button to complete the registration.
17
18     If you encounter any issues, reach out to our support team on either of these contacts below.
19
20     Phone number: +601133228274
21     e-mail: kinokunira@gmail.com
22
23     Thank you for choosing KinokunIra!
24     """
25
26     messagebox.showinfo("Help", help_text)
27
28  def register_member():
29      name = entry_name.get()
30      dob = entry_dob.get()
31      email = entry_email.get()
32      phone = entry_phone.get()
33
34      # Convert dob to date and calculate age
35      try:
36          dob_date = date.fromisoformat(dob)
37          age = (date.today() - dob_date).days // 365
38      except ValueError:
39          messagebox.showerror("Error", "Invalid Date of Birth format.")
40          return
41
42      # Validate input
43      if not name or not dob or not email or not phone:
44          messagebox.showerror("Error", "Please fill in all fields.")
45          return
46
47      elif not phone.startswith("60") or not phone[2:].isdigit():
48          messagebox.showerror("Invalid", "Phone number must start with '60' and contain only numeric values.")
49          return
50
51      else:
52          # Display registration information
53          registration_info = f"Name: {name}\nAge: {age}\nEmail: {email}\nPhone number: {phone}"
54          messagebox.showinfo("Registration Successful", registration_info)
55          print("Registration Successful!")
56          print("Name:", name)
57          print("Age:", age)
58          print("Email:", email)
59          print("Phone:", phone)
```

Figure 2.0 Line 1 to line 59 of “KinokunIra” bookshop membership registration system’s coding in Visual Studio Code

```

117 ira_Membership.py > show_help
118
119 # Establish a connection to the MySQL server
120 mydb = mysql.connector.connect(
121     host="localhost",
122     user="root",
123     password="",
124     database="ira_membership"
125 )
126
127 # Create a cursor object to interact with the database
128 cursor = mydb.cursor()
129
130 # Inserting data into a table
131 sql = "INSERT INTO `user_info` (user_name, user_dob, user_age, user_email, user_phone) VALUES (%s, %s, %s, %s, %s)"
132 val = (name, dob, age, email, phone)
133
134 try:
135     cursor.execute(sql, val)
136     mydb.commit()
137     print("Data inserted successfully!")
138
139 except mysql.connector.Error as err:
140     print(f"Error: {err}")
141     mydb.rollback()
142
143 cursor.close()
144 mydb.close()
145
146 def quit_application():
147     root.destroy()
148
149 # Create the main window
150 root = tk.Tk()
151
152 # Set window title
153 root.title("Book Shop Membership Registration")
154
155 # Set the window size and position
156 root.geometry("800x600+400+300")
157
158 # Set background color
159 root.configure(bg="#F5CEf2")
160
161 # Create and configure the labels
162 label_title = tk.Label(root, text="Welcome to KinokunIra!", font=("Times New Roman", 50, 'bold'))
163 label_subtitle = tk.Label(root, text="Register for a membership card now to get a discount!", font=('Times New Roman', 25))
164 label_name = tk.Label(root, text="Name:", font=("Arial", 15), bg="#f0f0f0")
165 label_email = tk.Label(root, text="Email (xxx@xxx.xxx):", font=("Arial", 15), bg="#f0f0f0")
166 label_phone = tk.Label(root, text="Phone number (+60 only):", font=("Arial", 15), bg="#f0f0f0")
167 label_dob = tk.Label(root, text="Date of birth (YYYY-MM-DD):", font=("Arial", 15), bg="#f0f0f0")
168
169 # Create and configure the entry widgets
170 entry_name = tk.Entry(root, font=("Arial", 12), width=30)
171 entry_email = tk.Entry(root, font=("Arial", 12), width=30)
172 entry_phone = tk.Entry(root, font=("Arial", 12), width=30)
173 entry_dob = tk.Entry(root, font=("Arial", 12), width=30)
174
175 # Create and configure the register button
176 register_button = tk.Button(root, text="Register", command=register_member, font=("Arial", 12), bg="#84e0b3", fg="black")
177
178 # Create and configure the quit button
179 quit_button = tk.Button(root, text="Quit application", command=quit_application, font=("Arial", 12), bg="#d9534f", fg="white")
180
181 # Create and configure the help button
182 help_button = tk.Button(root, text="Help", command=show_help, font=("Arial", 12), bg="#5bc0de", fg="black")

```

Figure 2.1 Line 61 to line 124 of “KinokunIra” bookshop membership registration system’s coding in Visual Studio Code

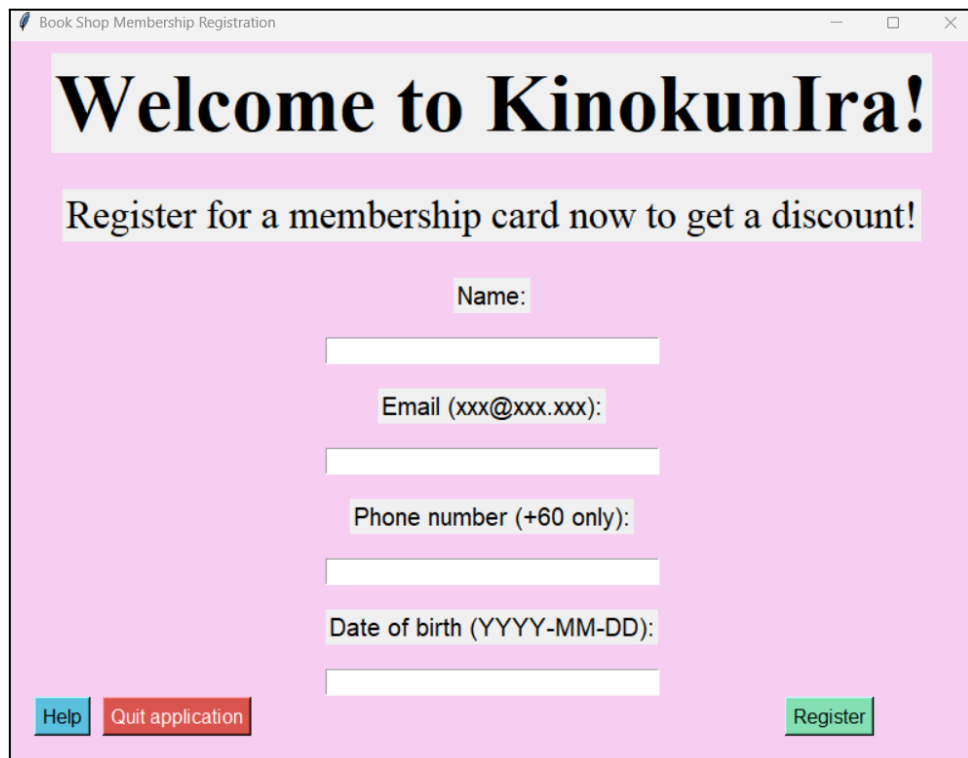

```

125
126 # Place the buttons on the window
127 register_button.place(relx=0.8, rely=0.9)
128 quit_button.place(relx=0.1, rely=0.9)
129 help_button.place(relx=0.03, rely=0.9)
130
131 # Place the labels, entry widgets, and button on the window using pack and place
132 label_title.pack(pady=10)
133 label_subtitle.pack(pady=20)
134 label_name.pack(pady=10)
135 entry_name.pack(pady=10)
136 label_email.pack(pady=10)
137 entry_email.pack(pady=10)
138 label_phone.pack(pady=10)
139 entry_phone.pack(pady=10)
140 label_dob.pack(pady=10)
141 entry_dob.pack(pady=10)
142
143 # Run the Tkinter event loop
144 root.mainloop()
145

```

Figure 2.2 Line 125 to line 144 of “Kinokunlra” bookshop membership registration system’s coding in Visual Studio Code

3.2 GRAPHICAL USER INTERFACE (GUI)



The screenshot shows a window titled "Book Shop Membership Registration". The background is light pink. At the top, a large black text box says "Welcome to KinokunIra!". Below it, another black text box says "Register for a membership card now to get a discount!". The registration form consists of five white input fields with labels: "Name:", "Email (xxx@xxx.xxx):", "Phone number (+60 only):", "Date of birth (YYYY-MM-DD):", and an unlabeled field for the date. At the bottom left are two buttons: "Help" (blue) and "Quit application" (red). At the bottom right is a "Register" button (green).

Figure 3.0 GUI of “KinokunIra” bookshop membership registration system

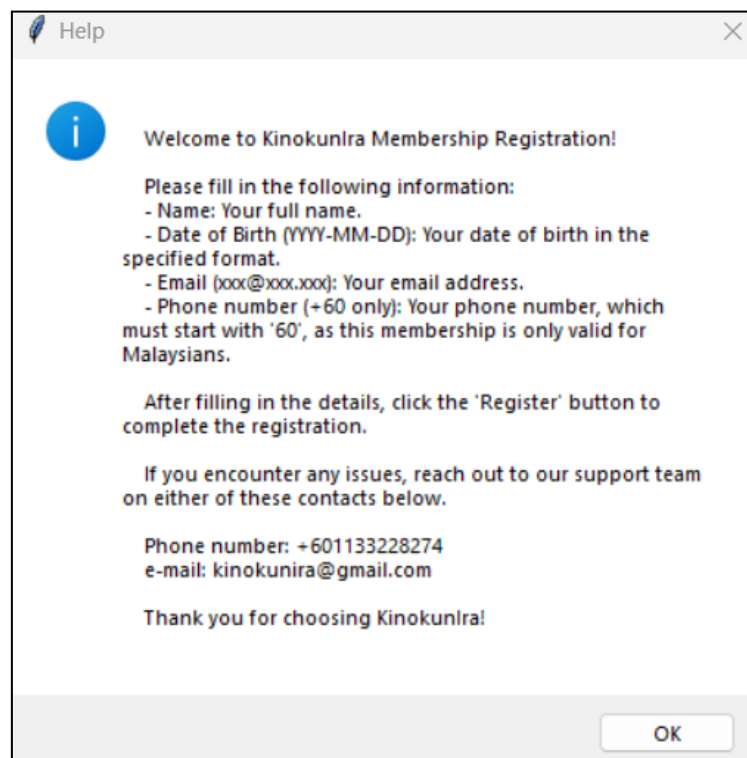


Figure 3.1 GUI of “KinokunIra” bookshop membership registration system’s ‘Help’ button

3.3 DATABASE

3.3.1 Table structure

Server: 127.0.0.1 » Database: ira_membership » Table: user info

Table structure | Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	user_name	text		No	None			Change Drop More
<input type="checkbox"/>	2	user_dob	date		No	None			Change Drop More
<input type="checkbox"/>	3	user_age	int(3)		No	None			Change Drop More
<input type="checkbox"/>	4	user_email	varchar(256)	utf8mb4_general_ci	No	None			Change Drop More
<input type="checkbox"/>	5	user_phone	bigint(14)		No	None			Change Drop More

3.3.2 The data browsing page

Server: 127.0.0.1 » Database: ira_membership » Table: user info

Table structure | SQL | Search | Insert | Export | Import | Privileges | Operations | Triggers

⚠ Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

✓ Showing rows 0 - 0 (1 total, Query took 0.0005 seconds.)

`SELECT * FROM `user info``

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

user_name	user_dob	user_age	user_email	user_phone
Nurul Syahadah	2010-11-11	13	cadahehe@gmail.com	60112349249

☐ Show all | Number of rows: 25 | Filter rows: Search this table

4.0 CONCLUSION

In summary, the creation of the 'Kinokunlra Membership Registration' system using Python's tkinter library for GUI and integration with phpMyAdmin has been a valuable learning experience. The system efficiently handles user registration, focusing on essential information like name, date of birth, email, and phone number. The phpMyAdmin database ensures secure data storage, with limited functionalities to Create and Read operations.

The system's dynamic feature calculates the user's age based on the entered date of birth, enhancing the overall user experience. The inclusion of a help button provides clear instructions for users, emphasizing the user-centric design.

Reflecting on the project, I have gained insights into GUI design, database integration, and Python programming. Overcoming coding challenges and ensuring data security were key aspects. This experience deepened my understanding of software development, setting a solid foundation for future projects. In conclusion, the 'Kinokunlra Membership Registration' system successfully combines functionality and user-friendliness, demonstrating the potential of Python and tkinter in creating effective applications with seamless database integration.