



اَوْنَبُوْ رَسِيْئِيْ تَتِيْكَنُوْ لُوْ كِيْ فَاْاَرَا  
UNIVERSITI  
TEKNOLOGI  
MARA

COLLEGE OF COMPUTING, INFORMATICS, AND MATHEMATICS

UNIVERSITI TEKNOLOGI MARA

KEDAH BRANCH

DIPLOMA IN LIBRARY INFORMATICS

(CDIM144)

PROGRAMMING FOR LIBRARIES

(IML208)

INDIVIDUAL ASSIGNMENT: OPAC SELF REGISTRATION

PREPARED BY;

RABIATUL ADAWIYAH BINTI SANUSI

2022486516

CLASS: KCDIM133 3B

PREPARED FOR;

AIRUL SHAZWAN BIN NORSHAHIMI

SUBMISSION DATE;

4<sup>th</sup> January 2024

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RABIATUL ADAWIYAH BINTI SANUSI

2022486516

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Name: RABIATUL ADAWIYAH BINTI SANUSI

Matric Number: 2022486516

Course Code: IML208

Programme code: CDIM144

Faculty / Campus : COLLEGE OF COMPUTING, INFORMATICS, AND MATHEMATICS

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Bahagian Pentaksiran dan Penilaian Akademik 2021

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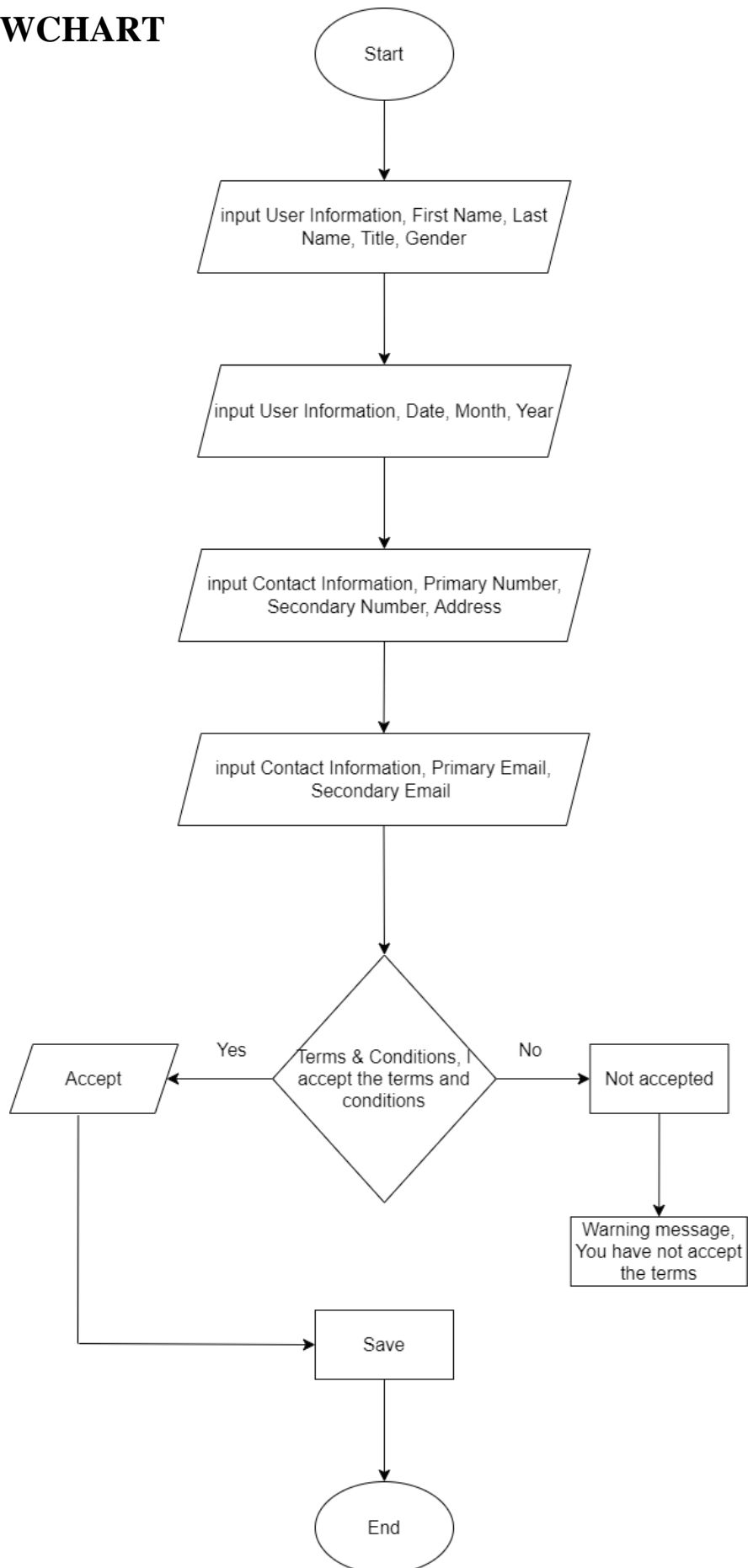
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## **1.0 INTRODUCTION**

Programming is simply the process of writing computer programs. Essentially developers write words and symbols that tell a computer what they want it to do. OPAC Self-Registration is a program for a library patron that allows them to register for their account via OPAC. The patrons need to fill in the user information first which includes first name, last name, title, gender, date of birth following date, month, and year. Next, the user needs to input contact information which are primary number, secondary number, address, primary email, and secondary email. Lastly, the user needs to click accept the terms and conditions button. After the user clicks the save button the user data will go into the database and the user age will be displayed.

## 2.0 FLOWCHART



### 3.0 CODING

```
import tkinter # function to import tkinter into python program
from tkinter import ttk # function to shorten tkinter word
import mysql.connector # function to connect mysql
from datetime import date # function to import date for age calculation
import tkinter.messagebox # fucntion to give warning for user
today = date.today() # today day to calculat with date of birth

# Function to insert data into the table
def insert_data():
    First_Name = first_name_entry.get()
    Last_Name = last_name_entry.get()
    Title = title_combobox.get()
    Gender = gender_combobox.get()
    Date = day_entry.get()
    Month = month_entry.get()
    Year = year_entry.get()
    Address = address_entry.get()
    First_Contact = contact1_entry.get()
    Second_Contact = contact2_entry.get()
    First_Email = email1_entry.get()
    Second_Email = email2_entry.get()

    mydb = mysql.connector.connect(
        host="localhost",
        user="root",
        password="",
        database="opac_registration"
    )
    cursor = mydb.cursor()

    cursor.execute("INSERT INTO user_registration (First_Name, Last_Name,
    Title, Gender, Date, Month, Year, Address, First_Contact, Second_Contact,
    First_Email, Second_Email) VALUES (%s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s, %s)", (First_Name, Last_Name, Title, Gender, Date, Month, Year, Address,
    First_Contact, Second_Contact, First_Email, Second_Email))

    mydb.commit()
    mydb.close()

# Function to calculage user age
def get_age():
    date = int(day_entry.get())
    month = int(month_entry.get())
    year = int(year_entry.get())
    age = today.year-year-((today.month, today.day)<(month,date))
```

```

date_entry2.config(state='normal')
date_entry2.insert(tkinter.END,age)
date_entry2.config(state='disabled')

# Function to check user click the terms & conditions
def check_terms_and_save():

    if accept_var.get():
        insert_data()

    else:
        tkinter.messagebox.showwarning(title= "Error", message= "You have not
accept the terms")

# Window title, geometry, frame and background color
window = tkinter.Tk()
window.title('OPAC Registration')
window.geometry("600x600")
window["background"] = "#F8C8DC"
frame = tkinter.Frame(window, bg= "#F8C8DC")
frame.pack()

# Page Title with background and font type size and color
label = ttk.Label(frame, text= "OPAC SELF REGISTRATION", font= ("Hopeful
Christmas Solid", 20), foreground= "#008000")
label.grid(ipadx= 20, ipady= 20)
label['background'] = "#F8C8DC"

# User Information Frame
user_info_frame = tkinter.LabelFrame(frame, text= "User Information", font=
("Arial Narrow", 14), foreground= "#008000")
user_info_frame.grid(row= 1, column= 0, padx= 20, pady= 10)
user_info_frame.config(font= ("Arial", 14))
user_info_frame["background"] = "#F8C8DC"

# User Name Label
first_name_label = tkinter.Label(user_info_frame, text= "First Name",
foreground= "#008000")
first_name_label.grid(row= 1, column= 0)
last_name_label = tkinter.Label(user_info_frame, text= "Last Name",
foreground= "#008000")
last_name_label.grid(row= 1, column= 1)
first_name_label["background"] = "#F8C8DC"
last_name_label["background"] = "#F8C8DC"

# User Name Entry for user to input text
first_name_entry = tkinter.Entry(user_info_frame, foreground= "#008000")
last_name_entry = tkinter.Entry(user_info_frame, foreground= "#008000")

```



```

first_name_entry.grid(row= 2, column= 0)
last_name_entry.grid(row= 2, column= 1)

# User Title label and entry
title_label = tkinter.Label(user_info_frame, text= "Title", foreground=
"#008000")
title_combobox = ttk.Combobox(user_info_frame, values= ["Mr.", "Ms.", "Mrs."],
foreground= "#008000")
title_label.grid(row= 1, column= 2)
title_combobox.grid(row= 2, column= 2)
title_label['background'] = "#F8C8DC"

# User Gender label and entry
gender_label = tkinter.Label(user_info_frame, text= "Gender", foreground=
"#008000")
gender_combobox = ttk.Combobox(user_info_frame, values= ["Male", "Female"],
foreground= "#008000")
gender_label.grid(row= 3, column= 0)
gender_combobox.grid(row= 4, column= 0)
gender_label['background'] = "#F8C8DC"

# User Date of Birth label
birth_label = tkinter.Label(user_info_frame, text= "Date of Birth",
foreground= "#008000")
birth_label.grid(row= 3, column= 1)
birth_label['background'] = "#F8C8DC"
day_label=ttk.Label(user_info_frame,text="Date:", foreground= "#008000")
month_label=ttk.Label(user_info_frame,text="Month: ", foreground= "#008000")
year_label=ttk.Label(user_info_frame,text="Year: ", foreground= "#008000")
day_label.grid(row= 4, column=1)
month_label.grid(row= 5, column= 1)
year_label.grid(row= 6, column= 1)

# User Date Entry
day_entry=ttk.Entry(user_info_frame,width= 10, foreground= "#008000")
month_entry=ttk.Entry(user_info_frame,width= 10, foreground= "#008000")
year_entry=ttk.Entry(user_info_frame, width= 10, foreground= "#008000")
day_entry.grid(row= 4, column=2)
month_entry.grid(row= 5, column= 2)
year_entry.grid(row= 6, column= 2)
day_label['background'] = "#F8C8DC"
month_label['background'] = "#F8C8DC"
year_label['background'] = "#F8C8DC"

# User age will be displayed after user click save button # calculation part
date_label2 = tkinter.Label(user_info_frame, text= "Your Age:", foreground=
"#008000")
date_label2.grid(row= 5, column= 0)

```

```

date_entry2 = tkinter.Entry(user_info_frame, width= 10,state="disabled",
foreground= "#008000")
date_entry2.grid(row= 6, column= 0)
date_label2['background'] = "#F8C8DC"

for widget in user_info_frame.winfo_children():
    widget.grid_configure(padx= 10, pady= 5)

# Contact Information Frame
contact_info_frame = tkinter.LabelFrame(frame, text= "Contact Information",
font= ("Arial Narrow", 14), foreground= "#008000")
contact_info_frame.grid(row= 6, column= 0, sticky= "news", padx= 20, pady= 10)
contact_info_frame.config(font= ("Arial", 14))
contact_info_frame["background"] = "#F8C8DC"

# User Full Address label and entry
address_label = tkinter.Label(contact_info_frame, text= "Address", foreground=
"#008000")
address_label.grid(row= 1, column= 2)
address_entry = tkinter.Entry(contact_info_frame, foreground= "#008000")
address_entry.grid(row= 2, column= 2)
address_label['background'] = "#F8C8DC"

# User Phone Number label and entry
# Primary Phone Number
contact1_label = tkinter.Label(contact_info_frame, text= "Primary Number",
foreground= "#008000")
contact1_label.grid(row= 1, column= 0)
contact1_entry = tkinter.Entry(contact_info_frame, foreground= "#008000")
contact1_entry.grid(row= 2, column= 0)
contact1_label['background'] = "#F8C8DC"

# Secondary Phone Number
contact2_label = tkinter.Label(contact_info_frame, text= "Secondary Number",
foreground= "#008000")
contact2_label.grid(row= 1, column= 1)
contact2_entry = tkinter.Entry(contact_info_frame, foreground= "#008000")
contact2_entry.grid(row= 2, column= 1)
contact2_label['background'] = "#F8C8DC"

# User Email label and entry
# Primary Email
email1_label = tkinter.Label(contact_info_frame, text= "Primary Email",
foreground= "#008000")
email1_label.grid(row= 3, column= 0)
email1_entry = tkinter.Entry(contact_info_frame, foreground= "#008000")
email1_entry.grid(row= 4, column= 0)
email1_label['background'] = "#F8C8DC"

```

```

# Secondary Email
email2_label = tkinter.Label(contact_info_frame, text= "Secondary Email",
foreground= "#008000")
email2_label.grid(row= 3, column= 1)
email2_entry = tkinter.Entry(contact_info_frame, foreground= "#008000")
email2_entry.grid(row= 4, column= 1)
email2_label['background'] = "#F8C8DC"

for widget in contact_info_frame.winfo_children():
    widget.grid_configure(padx= 10, pady= 5)

# Accept terms
terms_frame = tkinter.LabelFrame(frame, text= "Terms & Conditions", font=
("Arial Narrow", 14), foreground= "#008000")
terms_frame.grid(row= 15, column= 0, sticky= "news", padx= 20, pady= 10)
terms_frame['background'] = "#F8C8DC"

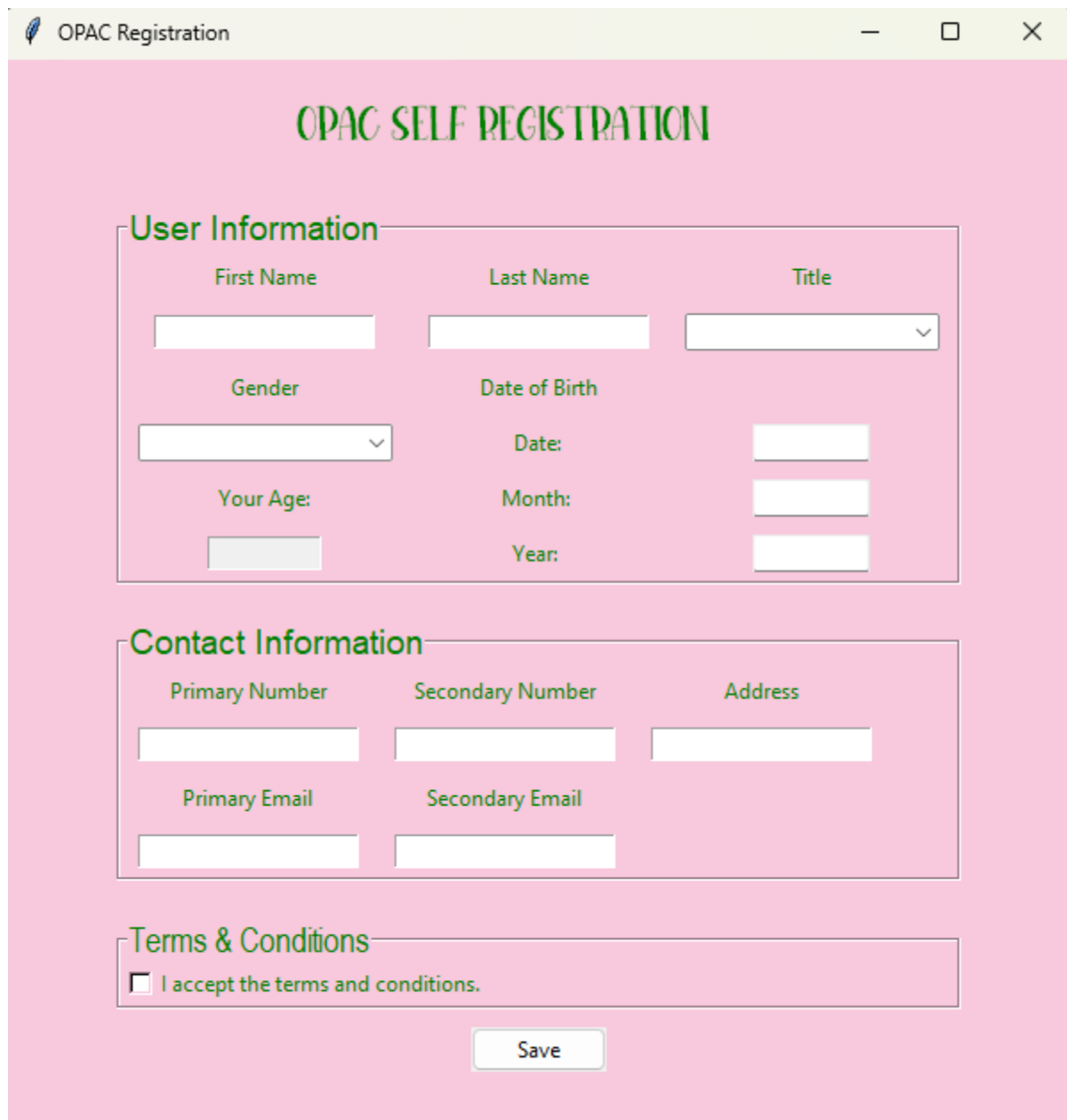
accept_var = tkinter.StringVar()
terms_check = tkinter.Checkbutton(terms_frame, text= "I accept the terms and
conditions.",
                                variable= accept_var, onvalue= "Accepted",
offvalue= "Not Accepted", foreground= "#008000")
terms_check.grid(row= 0, column= 0)
terms_check['background'] = "#F8C8DC"

# Buttons to perform operations
insert_button = ttk.Button(window, text= "Save", command=lambda:
[insert_data(), get_age(), check_terms_and_save()])
insert_button.pack()

window.mainloop()

```

### 3.0 GRAPHICAL USER INTERFACE (GUI)



The image shows a screenshot of a web application window titled "OPAC Registration". The window has a light green title bar with standard minimize, maximize, and close buttons. The main content area has a pink background and is titled "OPAC SELF REGISTRATION" in green, bold, serif font. Below the title, there are three sections: "User Information", "Contact Information", and "Terms & Conditions".

**User Information**

First Name	Last Name	Title
<input type="text"/>	<input type="text"/>	<input type="text"/>
Gender	Date of Birth	
<input type="text"/>	Date:	<input type="text"/>
Your Age:	Month:	<input type="text"/>
<input type="text"/>	Year:	<input type="text"/>

**Contact Information**

Primary Number	Secondary Number	Address
<input type="text"/>	<input type="text"/>	<input type="text"/>
Primary Email	Secondary Email	
<input type="text"/>	<input type="text"/>	

**Terms & Conditions**

☐ I accept the terms and conditions.

## 4.0 DATABASE

First_Name	Last_Name	Title	Gender	Date	Month	Year	Address	First_Contact	Second_Contact	First_Email	Second_Email
Rabiatul	Sanusi	Ms.	Female	30	11	2004	Lot 2395 Kampong Mengkuang Masjid	0136169837	01124141226	adawiyahsan@gmail.com	rabiatulsan@gmail.com
Adawiyah	Sanusi	Ms.	Female	30	11	2004	Lot 2395 Kampong Mengkuang Masjid	0196719345	01124141226	adawiyahsan@gmail.com	rabiatulsan@gmail.com
Adawiyah	Sanusi	Ms.	Female	30	11	2004	Lot 2395 Kampong Mengkuang Masjid	0196719345	01124141226	adawiyahsan@gmail.com	rabiatulsan@gmail.com
Fatimah	Ahmad	Mrs.	Female	11	8	1967	No 38 Taman Seri Kemuning, Jitra	0194474550	0134585540	fatimah@gmail.com	fatimah67@gmail.com
Fatimah	Ahmad	Mrs.	Female	11	8	1967	No 38 Taman Seri Kemuning, Jitra	0194474550	0134585540	fatimah@gmail.com	fatimah67@gmail.com

