

UNIVERSITY TECHNOLOGY MARA (UITM) KEDAH BRANCH COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS DIPLOMA IN LIBRARY INFORMATICS (IM144)

PROGRAMMING FOR LIBRARY (IML208)

TITLE: REPORT BLOOD DONATION REGISTRATION

PREPARED BY:

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ACKNOWLEDGEMENT

In reference to my individual assignment for the IML207 course, I would like to express my sincere appreciation and gratitude to my lecturer SIR AIRUL SHAZWAN BIN NORSHAHIMI for contributed to my understanding and knowledge in this subject matter.

I extend my deepest acknowledgements to the esteemed members, whose expertise and guidance have been paramount in shaping my comprehension of programming. Additionally, my sincere thanks go to my fellow classmates for engaging in insightful discussions and offering different perspectives, which have further enhanced my understanding of the subject matter. I am truly grateful for the opportunity to dive into the intricacies of this assignment and for the invaluable support.

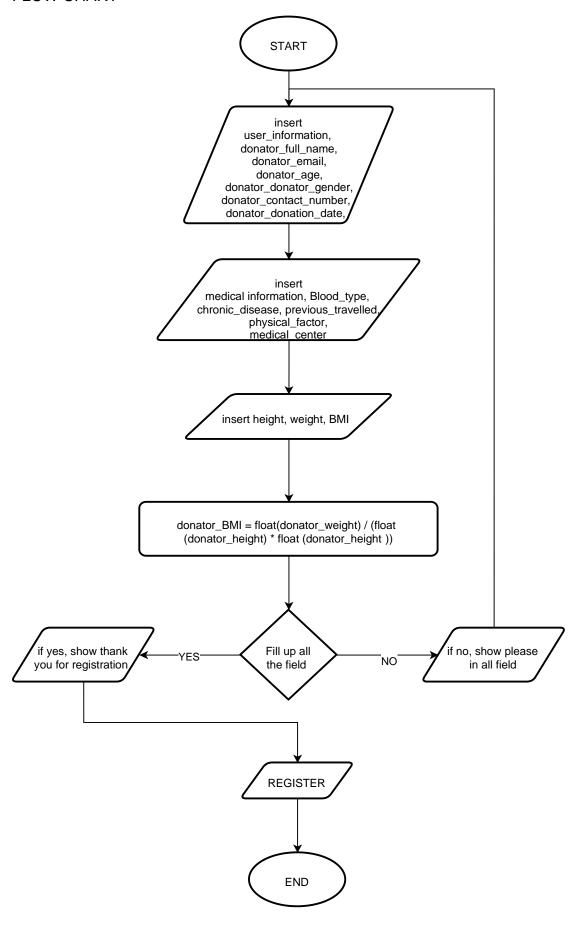
INTRODUCTION

In a time when technology is a driving force behind social change, the combination of public service and programming becomes essential. In order to help and expedite the vital process of blood donation, this individual assignment explores the development of an extensive Blood Donation Registration System using programming concepts. Combining software development with the humanitarian activity of blood donation represents a ground-breaking move in improving healthcare services' usability, efficacy, and accessibility.

The main goal of this project is to create and deploy an intuitive interface that makes it easy for donors to register and gives administrators a strong platform to handle donation information. It is impossible to overestimate the importance of blood donation, which provides a lifeline to countless people in need. This assignment aims to facilitate a streamlined registration process that crosses geographical barriers by bridging the gap between donors and beneficiaries through the utilization of programming languages and frameworks. Scalability and security will be given top priority in the layout of the system, guaranteeing a trustworthy store for important donor data while abiding by data privacy laws.

HOW THE SYSTEM WORK

The system work by the user need to fill up their personal information through the gui to link the database that was provided. So this project as a head quarters for the ministry of health that was to the who are interested to donate their blood for those who are required the donation. Moreover this GUI or project can give benefit to them because they no need to struggling for them to come to the hospital for register as physical registered.



SHOW CODE

```
import tkinter as tk
import mysql.connector
import array
import random
from tkinter import ttk
from tkinter import messagebox
from tkinter import Spinbox
import os
# Connect to your MySQL database
mydb = mysql.connector.connect(
   host="localhost",
    user="root",
   password="",
    database="blood donation registration"
# Create a cursor object to execute SQL queries
mycursor = mydb.cursor()
def REGISTER():
    donator full name = donator full name entry.get()
    donator email = donator email entry.get()
    donator age =donator age combobox.get()
    donator gender = donator gender combobox.get()
    donator_contact_number = donator_contact_number_entry.get()
    donator_address = donator_address_entry.get()
    donator donation date = donator donation date combobox.get()
    donator_blood_type = donator_blood_type_combobox.get()
    donator_chronic_disease = donator_chronic_disease_combobox.get()
    donator previous travelled = donator previous travelled combobox.get()
    donator physical factor = donator physical factor combobox.get()
    donator_medical_center = donator_medical_center_combobox.get()
    donator height = donator height entry.get()
    donator weight = donator weight entry.get()
    donator_BMI = donator_BMI_entry.get()
    #donator donation date = donator donation date combobox
    #for donation_date_combobox in range("1 January 2024" - "31 January
20124"):
    #donator_donation_date "1 January 2024" = :
    #print(donation date combobox)
```

```
if not donator_full_name or not donator_email or not donator_age or not
donator gender or not donator contact number or not donator address or not
donator blood type or not donator chronic disease or not
donator previous travelled or not donator physical factor or not
donator medical center or not donator height or not donator weight:
        messagebox.showerror('Error', 'Please fill in all fields.')
    else:
        messagebox.showinfo('Registration Successful', 'Thank you for
registering!')
        #calculation
        donator BMI = float(donator weight) / (float (donator height) * float
(donator_height))
        print("donater full name:", donator full name)
        print("donater email:", donator email)
        print("donater_age:", donator_age)
        print("donater_gender:", donator_gender)
        print("donater_contact_number:", donator_contact_number)
        print("donater_address:", donator_address)
        print("donation date:", donator_full_name_entry)
        print("donater_blood_type:", donator_blood_type)
        print("donater_chronic_disease:", donator_chronic_disease)
        print("donater_previous_travelled:", donator_previous_travelled)
        print("donater_physichal_factor:", donator_physical_factor)
        print("donater_medicaldonater_center:", donator_medical_center)
        print("donater_height:", donator_height)
        print("donater_weight:", donator_weight)
        print("donater_BMI:", donator_BMI)
        print("output_label.config(text=BMI)")
        for donation_date in range (1,31):
            print(donation_date)
        # To Print back The output. It will happen in the function
collect_data(). The f before the string indicates an f-string in Python.
        output_label.config(text=f" {donator_BMI}")
    # To insert your Data to your database, As for this example, you have 3
attributes. (2 Attributes from your selection (Package, Pack) and another
attributes that derived from your attributes (price))
    sql = "INSERT INTO blood donation (donator full name, donator email,
donator_age, donator_gender, donator_contact_number, donator_address,
donator_donation_date, donator_blood_type, donator_chronic_disease,
donator_previous_travelled, donator_physical_factor, donator_medical_center,
donator_height, donator_weight, donator_BMI) VALUES (%s, %s, %s, %s, %s, %s, %s,
%s, %s, %s, %s, %s, %s, %s, %s)"
```

```
val =(donator_full_name, donator_email, donator_age, donator_gender,
donator_contact_number, donator_address, donator_donation_date,
donator_blood_type, donator_chronic_disease, donator_previous_travelled,
donator_physical_factor, donator_medical_center, donator_height,
donator_weight, donator_BMI)
    mycursor.execute(sql, val)
    mydb.commit()
def RESET WINDOW ():
    # REDRAW THE WINDOW
    os.popen("blood donation.py")
    root.destroy()
#create graphic user interface (GUI)
root = tk.Tk()
root.geometry("1800x1800")
root.title("BLOOD DONATION ONLINE REGISTRATION")
root.configure(bg="#030303")
#user information
BLOOD_DONATION_REGISTRATION_root = tk.Label(root, text="BLOOD DONATION \n")
REGISTRATION", font=("TIMES NEW ROMAN", 34, "bold", "italic"),
bg="#030303", fg="#F1C40F")
BLOOD_DONATION_REGISTRATION_root.grid(row=0, column=0)
registration_number_root= tk.Label(root, text="Registration number",
font=("TIMES NEW ROMAN", 20 ), bg="#030303", fg="#F1C40F" )
registration_number_root.grid(row=0, column=2, padx=100, pady=0)
number_root = tk.Label(root, text="20232", font=("TIMES NEW ROMAN", 20 ),
bg="#F1C40F", fg="#030303")
number_root.grid(row=0, column=3, sticky="ew")
#number_root = tk.Label(root,random.randint(0,999999))
#number_root.grid(row=0, column=2, padx=100, pady=0)
#print(number_root)
User_information =tk.Label(root, text="
                                         USER INFORMATION ", font
=("TIMES NEW ROMAN", 20), bg="#F1C40F", fg="#030303")
User_information.grid(row=2, column=0, padx=0, pady=30)
Medical_information =tk.Label(root, text=" MEDICAL INFORMATION ", font
=("TIMES NEW ROMAN", 20), bg="#F1C40F", fg="#030303")
Medical_information.grid(row=2, column=2, padx=0, pady=0)
```

```
#USER INFORMATION
donator full name = tk.Label(root, text="
                                                              :", font
                                               Full Name
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_full_name.grid(row=3, column=0, padx=0, pady=0, sticky="ew")
donator full_name_entry = tk.Entry(root, font=("arial", 20),)
donator_full_name_entry.grid(row=3, column=1, sticky="ew")
donator_email = tk.Label(root, text="
                                       Email Address :", font =("TIMES NEW
ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_email.grid(row=4, column=0, padx=0, pady=10, sticky="ew")
donator_email_entry =tk.Entry(root, font=("arial", 20))
donator email entry.grid(row=4, column=1, sticky="ew")
donator_age = tk.Label(root, text="
                                                             :", font
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator age.grid(row=5, column=0, padx=0, pady=10, sticky="ew")
donator_age_combobox = ttk.Combobox(root, font=("arial", 20), values=["18",
"19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31",
"32", "33", "34", "35", "36", "37", "38", "39", "40"])
donator_age_combobox.grid(row=5, column=1, sticky="ew")
donator_gender = tk.Label(root, text="
                                                            :", font
                                              Gender
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_gender.grid(row=6, column=0, padx=0, pady=10, sticky="ew")
donator_gender_combobox = ttk.Combobox(root, font=("arial", 20), values=["",
"MALE", "FEMALE"])
donator_gender_combobox.grid(row=6, column=1, sticky="ew")
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_contact_number.grid(row=7, column=0, padx=0, pady=10, sticky="ew")
donator_contact_number_entry = tk.Entry(root, font=("arial", 20))
donator_contact_number_entry.grid(row=7, column=1, sticky="ew")
donator_address = tk.Label(root, text="
                                                               :",font
                                              Address
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_address.grid(row=8, column=0, padx=0, pady=10, sticky="ew" )
donator_address_entry = tk.Entry(root, font=("arial", 20))
donator_address_entry.grid(row=8, column=1, sticky="ew")
donator_donation_date = tk.Label(root, text="
                                                              :",font
                                              Donation date
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_donation_date.grid(row=10, column=0, padx=0, pady=10, sticky="ew" )
donator_donation_date_combobox = ttk.Combobox(root, font=("ARIAL", 20),
values=["20 January 2024", "27 January 2024"])
donator_donation_date_combobox.grid(row=10, column=1, padx=0, pady=10,
sticky="ew" )
```

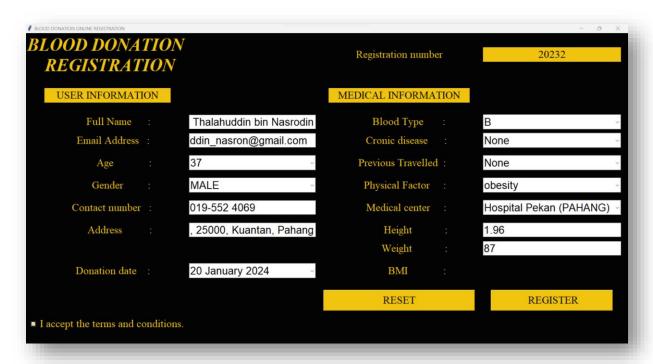
```
#for donation_date in range (1,31):
    #print(donation date)
#MEDICAL INFORMATION
donator blood type = tk.Label(root, text="
                                                               :", font
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_blood_type.grid(row=3, column=2, sticky="ew")
donator_blood_type_combobox = ttk.Combobox(root, font=("ARIAL", 20),
values=["", "A", "B", "AB", "O"])
donator_blood_type_combobox.grid(row=3, column=3, sticky="ew")
font =("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_chronic_disease.grid(row=4, column=2, sticky="ew")
donator chronic disease combobox = ttk.Combobox(root, font=("arial", 20),
values=["None", "DIABETES", "HIGH BLOOD PRESURE", "ASTHMA", "CANSER", "HIV",
"AIDS"])
donator_chronic_disease_combobox.grid(row=4, column=3, sticky="ew")
donator previous travelled =tk.Label(root, text=" Previous Travelled :",
font =("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_previous_travelled.grid(row=5, column=2, sticky="ew")
donator_previous_travelled_combobox = ttk.Combobox(root, font=("arial", 20),
values=["None", "ASIA", "AFRICA", "EUROPE", "ANTARTICA", "NORTH AMERICA",
"SOUTH AMERICA", "AUSTRALIA" ])
donator_previous_travelled_combobox.grid(row=5, column=3, sticky="ew")
donator_physical_factor = tk.Label(root, text="
                                                  Physical Factor
font =("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_physical_factor.grid(row=6, column=2, sticky="ew")
donator_physical_factor_combobox=ttk.Combobox(root, font=("arial", 20),
values=["None", "pregnant", "obesity", "Blind",])
donator_physical_factor_combobox.grid(row=6, column=3, sticky="ew")
donator_medical_center = tk.Label(root, text="
                                                  Medical center
                                                                    :", font
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_medical_center.grid(row=7, column=2)
donator_medical_center_combobox=ttk.Combobox (root, font=("arial", 20),
values=["Hospital Sultan Ismail Johor Bahru (JOHOR)", "Hospital Mersing
(JOHOR)", "Hospital Sultan Abdul Halim (KEDAH)", "Hospital Sultanah Bahiyah
(KEDAH)", "Hospital Sultan Ismail Petra (KELANTAN)", "Hospital Pasir Mas
(KELANTAN)", "Hospital Alor Gajah (MELAKA)", "Hospital Port Dickson (NEGERI
SEMBILAN)", "Hospital Tampin (NEGERI SEMBILAN)", "Hospital Pekan (PAHANG)",
"Hospital Sultan Hj Ahmad Shah(PAHANG)", "Hospital Balik Pulau (PULAU
PINANG)", "Hospital Sungai Bakap(PULAU PINANG)", "Hospital Bahagia Ulu Kinta
(PERAK)", "Hospital Teluk Intan(PERAK)", "Hospital Tuanku Fauziah
(PERLIS)", "Hospital Beaufort (SABAH)", "Hospital Queen Elizabeth
(SABAH)", "Hospital Kudat (SABAH)", "Hospital Sarikei (SARAWAK)", "Hospital Kapit
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(SARAWAK)", "Hospital Sri Aman (SARAWAK)", "Hospital Sultanah Nur Zahirah
(TERENGGANU)", "Hospital Hulu Terengganu (TERENGGANU)", "Hospital Shah Alam
(SELANGOR)", "Hospital Cyberjaya (SELANGOR)", "Hospital Kuala Lumpur (WP KUALA
LUMPUR)", "Hospital Labuan (WP LABUAN)", "Hospital Putrajaya (WP PUTRAJAYA)"])
donator medical center combobox.grid(row=7, column=3, sticky="ew")
donator_height= tk.Label(root, text="
                                                 Height
                                                                   :", font
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_height.grid(row=8, column=2, sticky="ew")
donator_height_entry = tk.Entry(root, font=("arial", 20))
donator_height_entry.grid(row=8, column=3, sticky="ew")
donator weight = tk.Label(root, text="
                                                                   :", font
                                                 Weight
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_weight.grid(row=9, column=2, sticky="ew")
donator_weight_entry = tk.Entry(root, font=("arial", 20))
donator_weight_entry.grid(row=9, column=3, sticky="ew")
donator BMI = tk.Label(root, text="
                                                                :", font
=("TIMES NEW ROMAN", 20), bg="#030303", fg="#F1C40F")
donator_BMI.grid(row=10, column=2, padx=20, pady=20 )
donator_BMI_entry = tk.Entry(root, font=("arial", 20))
donator_BMI_entry.configure(state='disabled')
#donator_BMI_entry.grid(row=10, column=3)
output_label = tk.Label(root, font=("arial", 20), bg="#030303", fg="#F1C40F")
output_label.grid(row=10, column=3, sticky="ew")
accept_var = tk.StringVar(value="Not Accepted")
terms_check = tk.Checkbutton(root, text= "I accept the terms and conditions.",
variable=accept_var, onvalue="Accepted", offvalue="Not Accepted", font=("TIMES")
NEW ROMAN", 20 ), bg="#030303", fg="#F1C40F")
terms_check.grid(row=12, column=0, sticky="ew")
#check button
button = tk.Button(root, text="
                                                              ", command=
                                           REGISTER
REGISTER, font=("TIMES NEW ROMAN", 20 ), bg="#F1C40F", fg="#030303")
button.grid(row=11, column=3, padx=20, pady=10, sticky="ew")
button2 = tk.Button(root, text="RESET", command= RESET_WINDOW, font=("TIMES")
NEW ROMAN", 20 ), bg="#F1C40F", fg="#030303")
button2.grid(row=11, column=2, padx=20, pady=10, sticky="ew")
root.mainloop()
```

SCREEN SHORT GUI



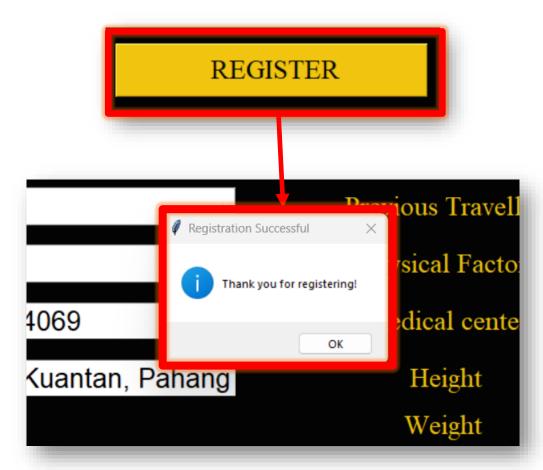
This is the graphic user interface (GUI)



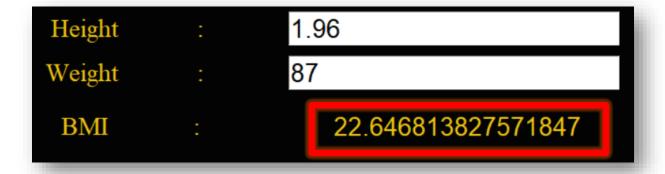
User need to fill all the information need

■ I accept the terms and conditions.

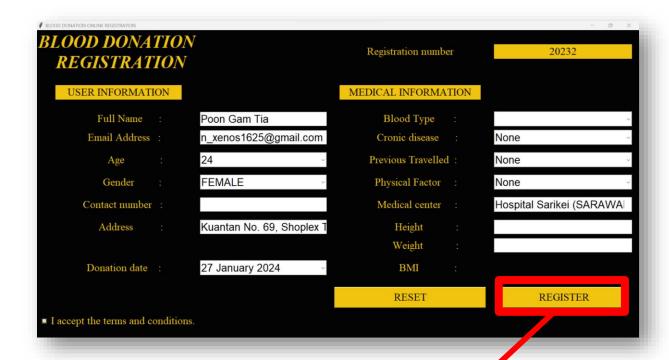
Click the "I Accept the terms and conditions" because it's about privacy security.



After click the "register button" it will appear the messagebox that a show the user

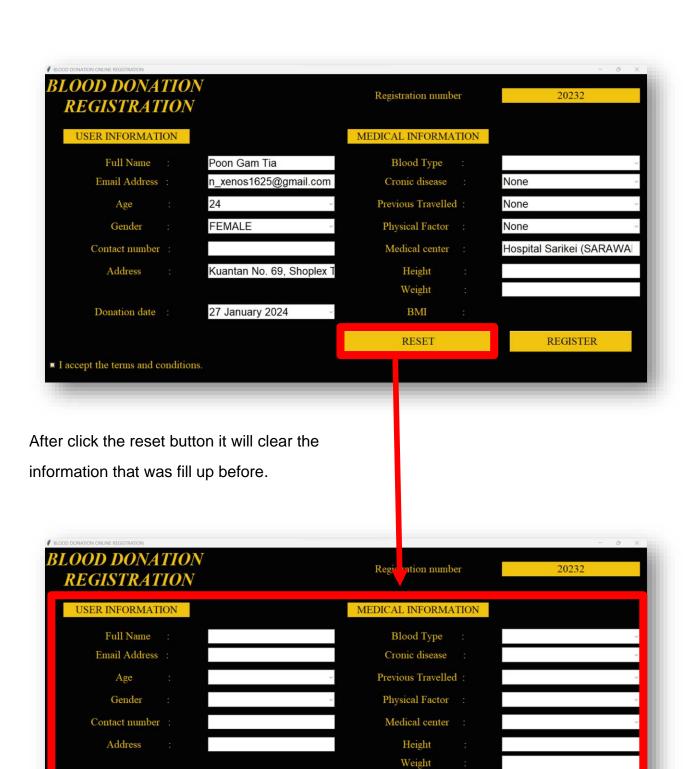


The user BMI will appear when the user click the button "ok" on the messagebox



If the user doesn't fill up the field it will be appear the error



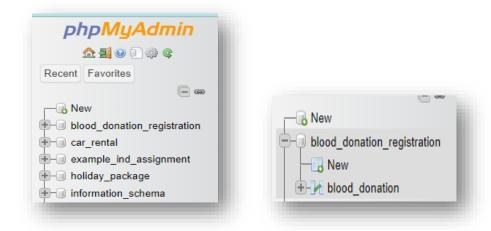


BMI

Donation date :

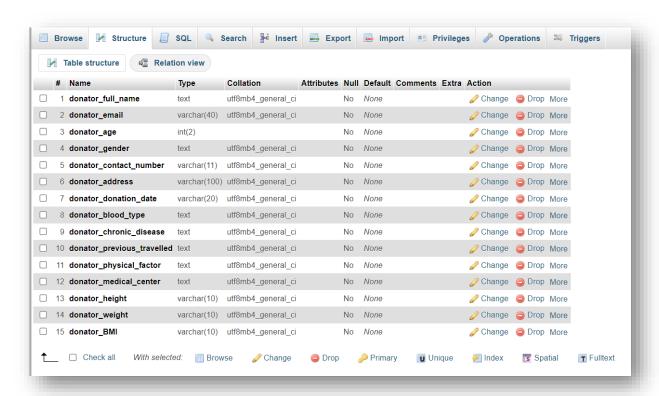
I accept the terms and conditions.

SHOW DATABASE

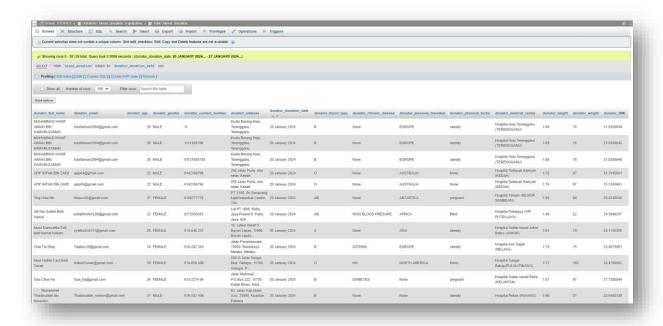


This is the database "blood_donation_registration" and the table is "blood_donation"

STRUCTURE



BROWSER



CONCLUSION

In conclusion, Project IML208 represents a revolutionary advancement in the field of blood donation systems by utilizing Python programming to optimize and improve the effectiveness of this essential procedure. This project has shown a deep awareness of the technology world as well as the humanitarian side of blood donation through careful design and coding. The Python application created as part of this project is an example of how technology can be used to further social responsibility. It provides an easy-to-use interface that makes managing donors, making appointments, and keeping track of inventories in blood banks and donation facilities simpler.

The application ensures smoother operations and facilitates seamless communication between donors, beneficiaries, and healthcare practitioners by utilizing the adaptability and resilience of Python. Administrators are also given access to insights regarding donation patterns through the system's data analysis capabilities, which facilitate proactive approaches to emergency response plans and blood inventory management. Therefore, by guaranteeing a sufficient and timely supply of blood to people in need, this fusion of technology and healthcare not only simplifies logistical operations but also has the potential to save lives.