BLOOD BANK SYSTEM

Computer project summary – C. Vidisha and Shikhar Sharma

Emergencies occur every minute. For each patient requiring blood, it is an emergency where they could have major setbacks if it is not available. A blood donation may be even more valuable than you realize. A single donation can help one or more patients. Every year India requires 40 million units of 250cc blood, out of which only a meagre 500,000 units of blood are available. The system software we have created is a Blood Bank System which helps us in managing various blood bank operations effectively.

The project consists of a central repository database containing various blood deposits which are Recipient safe. The system displays the amount of blood available for user and the details associated with it like i.e. procedure and Recipient safe policies. It also gives the user his own dashboard where he can look at other things available in the menu. The database includes details of the user like name, blood type, date of storage etc. which helps us in maintaining and monitoring the blood deposits.

This project allows the user to check whether the required blood deposits of a particular group are available in the blood bank or not, which is then viewed graphically using a pie chart for easy understanding of the blood donations. The system provides the computed data represented for blood type donated vs. requirement on line graphs. The system also displays information based on the age group of people who donate blood and this data is graphically available in the form of bar graphs for the user to select. Moreover, the system has additional features such as sign up and login with other details. The user can view the blood group and the amount of blood available of each group once logged in. The system computes the amount of blood from which the certain blood type can be drawn from, including other blood groups and chooses the most conveniently available one. For example, if O+ blood type is more abundantly available than A+ for a patient of A+ blood type, O+ is provided as a first preference to the user.

During withdrawal, system will best draw conclusions from the graphs which will send the user details about the blood in the best way possible. The software is written in python with *tkinter* as the user interface. It is supported by a *MySQL* database to store the information of the donor, specifications of the blood and more details. This software is made for a social cause and to help society.

Advantages of this blood bank system:

* Encourages blood donors to donate as the system tells every necessary detail they need to know.
* Helps people find blood donors in times of need and emergency.
* This system is automated which reduces manual entries and manual computation of data.
* This system uses graphs in order to make the data simple to understand and has minimum error compared to manual procedures.

try :

import mysql.connector

import tkinter as tk

import tkinter.messagebox as box

from tkinter import \*

except:

import mysql.connector

import tkinter as tk

import tkinter.messagebox as box

from tkinter import \*

mydb = mysql.connector.connect(

host="127.0.0.1",

user="root",

passwd="user123",

database="user"

)

mycursor = mydb.cursor()

#mycursor.execute("SHOW DATABASES")

#mycursor.execute("CREATE DATABASE user")

#mycursor.execute("CREATE TABLE login (id INTEGER(255),user\_name VARCHAR(255), password VARCHAR(255))")

#sql = "INSERT INTO login (user\_name, password) VALUES (%s, %s)"

#val = [

#('Peter', '1'),

#('Amy', '2'),

#('Hannah', '3'),

#('Michael', '4'),

#('Sandy', '5'),

#('vii', '6'),

#]

#mycursor.executemany(sql, val)

#mydb.commit()

#mycursor.execute("CREATE TABLE blood (id INTEGER(255),full\_name VARCHAR(255), pass\_word VARCHAR(255), gender VARCHAR(255), age VARCHAR(255),mobile\_number INTEGER(255),email\_id VARCHAR(255), city VARCHAR(255), pincode VARCHAR(255), blood\_type VARCHAR(255), months\_donation INTEGER(250), number\_donations integer(250),volume integer(250) )")

def main():

main = tk.Tk()

main.geometry("1920x920")

main.iconbitmap(r'logo.ico')

f = tk.Canvas(bg="red", height =2190 ,width =1520)

f.grid()

pic\_main\_lo = tk.PhotoImage(file="blood\_donorlo.PNG")

pic\_main = tk.Label(f,bg = 'red',bd = '3',image = pic\_main\_lo)

pic\_main.place(x=0,y = 0)

main.title("WELCOME TO BLOOD DONOR")

btn = tk.Button(f, text = 'Login', command = login, fg = "White" ,bg="Black", width="15")

btn.place(x=100,y=125)

btn = tk.Button(f, text = 'Signup', command = signup, fg = "White" ,bg="Black", width="15")

btn.place(x=350,y=125)

btn = tk.Button(f, text = 'About us', command = abtus, fg = "White" ,bg="Black", width="15")

btn.place(x=850,y=125)

btn = tk.Button(f, text = 'Privacy Policies', command = privpol, fg = "White" ,bg="Black", width="15")

btn.place(x=1100,y=125)

btn = tk.Button(f, text = 'Blood tips', command =login, fg = "White" ,bg="Black", width="15")

btn.place(x=600,y=125)

bgg = tk.PhotoImage(file="bloodd.gif")

bg = tk.Label(f,bg = 'red',bd = '3',image = bgg)

bg.place(x=150,y = 150)

main.mainloop()

def login():

def dialog1():

mycursor.execute("Select \* from blood")

global username

username = e1.get()

password = e2.get()

flag = 0

l = list(mycursor)

for x in l:

if ( (x[1] == username) & (x[2] == password)):

flag = flag +1

if (flag == 1):

box.showinfo("info","You have been logged in")

dashboard(username)

else:

box.showinfo("info","wrong try again")

top = tk.Toplevel()

top.title('WELCOME TO BLOOD DONOR Login page')

top.geometry("1196x1080")

top.iconbitmap(r'logo.ico')

f = tk.Canvas(top,bg="red", height =2190 ,width =1200)

f.grid()

pic\_main\_sh = tk.PhotoImage(file="blood\_donor.PNG")

labpic = tk.Label (f, bg = 'red',bd = '3', image = pic\_main\_sh)

labpic.place(x=0,y = 0)

label = tk.Label(f, text= "Login",fg = "White",bg = "red",width=15,font=("Courier", 35))

label.place(x=400,y = 130)

label1 = tk.Label(f,text = 'Username:' ,fg="white",bg = 'red',width=20,font=("Bold", 25))

label1.place(x=300,y=200)

e1 = tk.Entry(f)

e1.place(x=620,y=213)

label2 = tk.Label(f,text = 'Password:' ,fg="white",bg = 'red',width=20,font=("Bold", 25))

label2.place(x=300,y=270)

e2 = tk.Entry(f,show="\*",width=30)

e2.place(x=620,y=283)

btn = tk.Button(f, text = 'Login',command = dialog1, fg = "White" ,bg="Black", width="15")

btn.place(x=560,y=350)

about =tk.Label(f,text = 'About us:' ,fg="white",bg = 'red',font=("Bold", 25))

about1 =tk.Label(f,fg="white",bg = 'red',text = 'We help to donate blood in the most effective way through our portal and try our best to give the user a friendly and easy environment for blood donation procedures' , font=("Courier", 20),wraplength="1200")

about.place (x=10,y=550)

about1.place (x=10,y=600)

about3 =tk.Label(f,text = 'You can contact us on: 9878956436(Moblie) or 080-2545674(land-line)' ,fg="white",bg = 'red',font=("Courier", 15))

about3.place(x=10,y=710)

top.mainloop()

def signup():

def dialog2():

mycursor.execute("Select \* from login")

global username

fname = e1.get()

username = e2.get()

password = e3.get()

flag = 0

l = list(mycursor)

print(l)

for x in l:

if ( (x[1] == username) and (x[2] == password)):

flag = 1

if ( (x[1] != username)and len (password)>2 ):

flag = 2

if ((len(username)<4) or (len(password)<=2)):

flag = -1

if (click.get() == 0 ):

flag = 3

if (flag == 1):

box.showinfo("info","Sorry this User name and Password is taken")

elif (flag == -1):

box.showinfo("info","The length of user name must be minimum of 5 characters and the length of the password must be greater than 2 character")

elif(flag == 3):

box.showinfo("info","Please accept the terms and condition")

elif (flag == 2):

box.showinfo("info","Your have been registered")

f\_name = e1.get()

u\_name = e2.get()

pass\_= e3.get()

if var.get()==1:

gen = "Male"

else:

gen="Female"

b\_type ="A positive"

e\_id = e4.get()

age=e6.get()

mob=e5.get()

city=e7.get()

pin=e8.get()

sql = "INSERT INTO blood (id, full\_name, pass\_word, gender, age,mobile\_number ,email\_id , city, pincode, blood\_type,months\_donation, number\_donations,volume) VALUES (%s, %s, %s,%s, %s, %s,%s,%s,%s,%s,%s,%s, %s)"

val = [

("123",f\_name,pass\_,gen,age,mob,e\_id,city,pin,b\_type,"9","6","47")

]

mycursor.executemany(sql, val)

mydb.commit()

dashboard(username)

top = tk.Toplevel()

top.geometry('1196x1080')

top.iconbitmap(r'logo.ico')

top.title('WELCOME TO BLOOD DONOR Sign up page')

f=tk.Canvas(top,bg="red", height = 2190 ,width =1200)

f.grid()

pic\_main\_sh = tk.PhotoImage(file="blood\_donor.PNG")

labpic = tk.Label(f,bg = 'red',bd = '3',image = pic\_main\_sh)

labpic.place(x=0,y = 0)

pic\_yes = tk.PhotoImage(file="yes.PNG")

yes = tk.Label(f,bg = 'red',image = pic\_yes)

yes.place(x=800,y = 120)

label = tk.Label(f, text="Register",fg = "White",bg = "red",width=15,font=("Courier", 35))

label.place(x=350,y = 130)

label1 = tk.Label(f, text="Full Name",width=20,font=("bold", 12))

label1.place(x=300,y = 190)

e1 = tk.Entry(f)

e1.place(x=600,y = 190)

label2 = tk.Label(f, text="User Name",width=20,font=("bold", 12))

label2.place(x=300,y=230)

e2 = tk.Entry(f)

e2.place(x=600,y = 230)

label3 = tk.Label(f, text="Password",width=20,font=("bold", 12))

label3.place(x=300,y=270)

e3 = tk.Entry(f)

e3.place(x=600,y = 270)

label4 = tk.Label(f,text="Gender",width=20,font=("bold", 12))

label4.place(x=300,y = 310)

var = IntVar()

r = tk.Radiobutton(f, text="Male",font=("bold", 12),variable=var, value=1)

r.place(x=600,y = 310)

r1=Radiobutton(f, text="Female",font=("bold", 12),variable=var, value=2)

r1.place(x=700,y = 310)

label5 = tk.Label(f, text="Blood Type",width=20,font=("bold", 12))

label5.place(x=300,y = 350)

list1 = ['A Positive','A Negative','B Positive','B Negative','AB Positive','AB negative','O positive','O negative'];

c=StringVar()

droplist = OptionMenu(f,c, \*list1)

droplist.config(width=20)

c.set('Select your Blood Type')

droplist.place(x=600,y = 350)

label6 = tk.Label(f,text="Email id ",width=20,font=("bold", 12))

label6.place(x=300,y = 390)

e4 = tk.Entry(f,width = 35)

e4.place(x=600,y = 390)

label7 = tk.Label(f,text="Mobile Number",width=20,font=("bold", 12))

label7.place(x=300,y = 430)

e5 = tk.Entry(f,width = 15)

e5.place(x=600,y = 430)

label8 = tk.Label(f,text="Age",width=20,font=("bold", 12))

label8.place(x=300,y = 470)

e6 = tk.Entry(f,width = 25)

e6.place(x=600,y = 470)

label9 = tk.Label(f,text="City",width=20,font=("bold", 12))

label9.place(x=300,y = 510)

e7 = tk.Entry(f,width = 25)

e7.place(x=600,y = 510)

label10 = tk.Label(f,text="Pin code",width=20,font=("bold", 12))

label10.place(x=300,y = 550)

e8 = tk.Entry(f,width = 25)

e8.place(x=600,y = 550)

click = IntVar()

c = tk.Checkbutton(f, text = "I Agree to all the terms and conditions", variable = click, \

offvalue = 0,onvalue = 1,activebackground= "white",

bg='red', width = 30,font=("bold", 12))

c.place(x=480,y = 590)

Button(f, text='Submit',command = dialog2 , width=20,bg='Black',fg='white').place(x=500,y = 640)

top.mainloop()

def abtus():

topa=tk.Toplevel()

topa.geometry('1196x1080')

topa.iconbitmap(r'logo.ico')

topa.config(bg='red')

topa.title('WELCOME TO BLOOD DONOR About us page')

pic = tk.PhotoImage(file="blood\_donor.PNG")

labpic = tk.Label(topa,bg = 'red',image = pic)

labpic.place(x=0,y = 0)

head=tk.Label(text="ABOUT US:",font=("Helvetica",25))

display="Universally, 'Blood' is recognized as the most precious element that sustains life.\n It saves innumerable lives across the world in a variety of conditions. Once in every 2- seconds, someone, somewhere is desperately in need of blood.\n More than 29 million units of blood components are transfused every year. The need for blood is great - on any given day, approximately 39,000 units of Red Blood Cells are needed. \n Each year, we could meet only up to 1% (approx) of our nation’s demand for blood transfusion.Despite the increase in the number of donors, blood remains in short supply during emergencies, mainly attributed to the lack of information and accessibility. \n We positively believe this tool can overcome most of these challenges by effectively connecting the blood donors with the blood recipients."

about =tk.Label(topa,text = 'ABOUT US:' ,fg="black",bg = 'red',font=("Helvetica", 25,"bold"))

about1 =tk.Label(topa,fg="black",bg = 'red',text = display , font=("Courier", 18),wraplength="1200")

about.place (x=450,y=150)

about1.place (x=10,y=200)

about3 =tk.Label(topa,text = 'You can contact us on: 9878956436(Moblie) or 080-2545674(land-line)' ,fg="black",bg = 'red',font=("Courier", 15))

about3.place(x=10,y=800)

topa.mainloop()

def privpol():

topa=tk.Toplevel()

topa.geometry('1196x1080')

topa.iconbitmap(r'logo.ico')

topa.config(bg='red')

pic = tk.PhotoImage(file="blood\_donor.PNG")

labpic = tk.Label(topa,bg = 'red',image = pic)

labpic.place(x=0,y = 0)

topa.title('WELCOME TO BLOOD DONOR Privacy policies page')

head=tk.Label(text="ABOUT US:",font=("Helvetica",25))

display="When you visit certain areas of this blood bank including the registration form, you may be asked to provide personal information (such as name, address, e-mail address, and phone number) that we need to process your request. In the event that you decline to provide such information, we will be unable to process your request.This privacy policy extends to this blood bank only.If you have any questions or concerns about the online policy for this site or its implementation you may contact us using the details posted on the ‘contact us’ page on our website. \n Terms of use \n This is purely a non-profit directed towards the welfare of our community. Any individual or entity that enrolls for our service does so with his/her own will and at no obligation to any one else or any other entity. We seriously condemn the use of this project for any commercial purpose, including solicitation for commercial gain based on the contact details posted by the registered users. We take the privacy of our users very seriously and therefore reserve the right to pursue a legal action against the individuals or entities violating our terms of use. The formal complaints procedure should only be used where the complainant feels that the nature of the complaint is too serious to be dealt with informally, or where a satisfactory conclusion has not been reached after following the informal procedure. A formal complaint should be made in writing to BloodBank team, who will acknowledge receipt and ensure that the matter is looked into at the earliest possible."

about =tk.Label(topa,text = 'Privacy policies:' ,fg="black",bg = 'red',font=("Helvetica", 20,"bold"))

about1 =tk.Label(topa,fg="black",bg = 'red',text = display , font=("Courier", 12),wraplength="1200")

about.place (x=450,y=150)

about1.place (x=10,y=200)

about3 =tk.Label(topa,text = 'You can contact us on: 9878956436(Moblie) or 080-2545674(land-line)' ,fg="black",bg = 'red',font=("Courier", 15))

about3.place(x=10,y=500)

about =tk.Label(topa,text = 'About us:' ,fg="white",bg = 'red',font=("Bold", 18))

about1 =tk.Label(topa,fg="white",bg = 'red',text = 'We help to donate blood in the most effective way through our portal and try our best to give the user a friendly and easy environment for blood donation procedures' , font=("Courier", 15),wraplength="1200")

about.place (x=30,y=700)

about1.place (x=30,y=730)

about3 =tk.Label(topa,text = 'You can contact us on: 9878956436(Moblie) or 080-2545674(land-line)' ,fg="white",bg = 'red',font=("Courier", 15))

about3.place(x=30,y=790)

topa.mainloop()

def dashboard(username):

dashboard = tk.Toplevel()

dashboard.geometry("1920x1080")

dashboard.iconbitmap(r'logo.ico')

dashboard.title("DASHBOARD")

f = tk.Canvas(dashboard,bg="red", height =2190 ,width =1520)

f.grid()

pic\_dash\_lo = tk.PhotoImage(file="blood\_donorlo.PNG")

pic\_dash = tk.Label(f,bg = 'black',bd = '3',image = pic\_dash\_lo)

pic\_dash.place(x=0,y = 0)

label1 = tk.Label(f,relief="solid",bg = "red",width=187,height=5)

label1.place(x=200,y = 120)

label2 = tk.Label(f, text= "Welcome "+username[0:5]+" ;",fg = "White",bg = "red",width=27,font=("Courier", 16))

label2.place(x=190,y = 150)

label3 = tk.Label(f, text= "Dashboard",fg = "White",bg = "red",width=37,font=("Bold", 28))

label3.place(x=440,y = 140)

label4 = tk.Label(f,relief="solid",bg = "red",width=37,height=47)

label4.place(x=0,y = 120)

btn1 = tk.Button(f, text = 'to fill',fg = "black" ,activebackground="blue",bg="white", width=23,font=("Courier", 13))

btn1.place(x=10,y=250)

btn2 = tk.Button(f, text = 'to fill',fg = "black" ,bg="white", width=23,font=("Courier", 13))

btn2.place(x=10,y=300)

btn3 = tk.Button(f, text = 'to fill',fg = "black" ,bg="white", width=23,font=("Courier", 13))

btn3.place(x=10,y=350)

btn4 = tk.Button(f, text = 'to fill',fg = "black" ,bg="white", width=23,font=("Courier", 13))

btn4.place(x=10,y=400)

btn5 = tk.Button(f, text = 'to fill',fg = "black" ,bg="white", width=23,font=("Courier", 13))

btn5.place(x=10,y=450)

btn6 = tk.Button(f, text = 'to fill',fg = "black" ,bg="white", width=23,font=("Courier", 13))

btn6.place(x=10,y=500)

dashboard.mainloop()

main()