**BLOOD BANK ONLINE MANAGEMENT SYSTEM**

A TECHNICAL SEMINAR Report submitted to **Jawaharlal Nehru Technological University, Hyderabad** In partial fulfilment for the requirement for the award of B. Tech Degree in Computer Science and Engineering

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**CERTIFICATE**

This is to certify to the **TECHNICAL SEMINOR** entitled **ONLINE BLOOD BANK MANAGEMENT SYSTEM** is submitted by Ch.Divya, P.Sai Harshini,G.Kalpana,G.Sharath Kumar,G.Lakshmi Priya bearing (21641A0569, 21641A05C1, 21641A0576, 21641A0575, 21645A0572) in partial fulfillment of the requirements for the award of theDegree in Bachelor of Technology in Computer Science and Engineering during the academic year 2023 - 2024 .

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**ABSTRACT**

The main goal of the Online Blood Bank Management System project is to monitor Blood Bank data, Blood stock, Donor List. It manages all the Blood Bank, Donor, and Blood stock data. The project is entirely administrative and therefore access is guaranteed only to the administrator. The Main aim of the Blood Bank Management system is to ease the process of blood donation and allowance at the blood bank. We aim to demonstrate the use of creating, reading, updating, and deleting operations of MySQL through this project. This project starts by adding details of the doctor. Once, registration is done doctor can add blood donor details with blood group, quantity, age, etc. Now, when the patient needs blood, doctors can easily check the blood group available and provide it to the blood receiver.

**INTRODUCTION**

The Blood Bank Management System Project was developed using python

programming. This project is a simple project that is created using Graphical User Interface (GUI). The Online Blood Bank Management System is a pivotal solution designed to streamline and enhance the process of blood donation, storage, and distribution. This system serves as a digital platform that facilitates efficient coordination between donors, recipients, and blood banks, ensuring timely access to blood units in critical situations.With its user-friendly interface, the system enables prospective donors to register online, providing their details and availability for donation. It maintains a comprehensive database, meticulously organizing donor information, blood types, and quantities available within various blood banks.Through this platform, recipients or hospitals in need can swiftly search for and request the required blood type. The system automates the allocation process, matching donors with compatible blood types to fulfill the requests promptly.Moreover, it offers real-time updates on blood inventory levels, expiration dates, and donation schedules, optimizing the management of blood stocks and minimizing wastage. Security measures are integrated to ensure the confidentiality and accuracy of sensitive donor information. The Online Blood Bank Management System aims to bridge the gap between blood donors and recipients, promoting a more efficient, accessible, and lifesaving approach to blood donation and distribution.

**REQUEMENTS**

**Software Requirements :**

* Python
* MySql

■ Name

■ Blood group

■ Age

■ Any diseases

■ Blood units

■ Mobile number

We can select any person with these details ,which we require and suits for requirement And accept as a donor.

**EXISTING SYSTEM**

In current scenario, if a patient is suffering from rigorous blood loss and if they require blood imperatively then and people rushed to the blood bank from one to another. To get the categorical blood group blood which is very lengthy process and requires physical assistance but there is no time to delay as it is very crucial moment for the patient to surving. If a person edifies to the most proximate blood bank and if they ask for the particular bloodgroup then it is not always indispensable. That the particular blood group is available in the blood bank then he has to peregrinate to the other blood bank which will take time and it will cost to the life of the patient.

**PROPOSED SYSTEM**

The proposed Blood Bank management system it is a one stop solution for all the quandaries which are faced by the patients as well as the donors. This system will provide avail at the time of emergency without delaying. It will contact the nearby blood bank in no time and the Rescue Team will appear onsite within the time to take care of the patient. The proposed system (Blood Bank Management System) is designed to help the Blood Bank administrator to meet the demand of Blood by sending and/or serving the request for Blood when required. The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Banks.

**PATIENT DETAILS**

There are many people who become sick each day and also there are many people who met with accident daily and at any point of time they need blood from the blood bank therefore their details need to be saved in the system. This entity holds the accounts of different patient.

■ Different patients and save their details distinctively for future purpose also. This entity saves the data like the age, medical history of the patient, and his personal details.

**Name**: There are many patients who are attached in the system there for the name of the patient need to be saved in the No.The patients contact number is saved in this attribute to contact them by the hospital or by the blood bank.

**Age**: The age of the patient need to be saved on this day understand the dose of

medicine and the amount of blood he needs at the time of emergency.

**Blood Group**: It is better to save the blood group of the patient in advance so that look like can be arranged as soon as possible.

**Current Disease**: The type of the disease from which the patient is suffering

currently saved in this attribute.

**DONAR DETAILS**

The person who comes forward to donate the blood is called the donor full stop there are many person who donates the blood on a regular time interval it is also a good thing for their body as when it is it is very helpful for patients who are very critical and dealing with the major sickness because of some accident or other medical problems. This entity provides individual accounts to each user who are regular and donating the blood equal time interval.

**Name**: The name of each donor who is attached with the system to be save this attribute.

**Contact** No: The donor can be contacted at any point of time if a particular blood group is needed to save a specific patient their corresponding contact number is stored in this attribute.

**Age**: The present age of each Donor is needed to be saved in the system to contact them taking the blood in time of need.Blood Grp: The blood group of women is registered in the system so that they can be contacted by the blood bank to receive their blood.

**Residence**: The permanent address of each dollar is hold in this attribute to contact the donor who is living nearby the blood bank if in case of emergency.

**BLOOD BANK MANAGEMENT SYSTEM**

■ In this file, we are fetching all the records from the Blood Bank table and displaying

the same on the screen.

■ The entries consist of blood group, the units of blood available of the particular blood group, and two tkinter buttons to perform the functionalities (donate, and

request) and as per user requirement, it calls the function.

■ Request(): This method asks the user to enter the required blood group and amount

using the Tkinter entry widget and then it offers a submit button to call the

request\_dbase() method which checks availability and updates data correspondingly.

* Request \_dbase(): This method actually connects with the database and checks if the asked amount of blood is available or not. If not it displays the required message.

Otherwise, it completes the request and reduces the units of the particular blood group

in the database, and flashes the corresponding message. The two other methods(donate& donate\_base)are almost same as the request and requested\_base,it just increase the units of a blood donated by the user.

**OBJECTIVES AND LIMITATIONS**

**OBJECTIVES :**

This applied research aims to design, develop and implement online blood bank

management system. This web-based application provides:

■ To ensure hospital to have good supply or inventories of blood bags.

■ To check the availability of blood bags anytime.

■ To manage the information of its blood donor.

■ Function to check if the person donate blood for the last 3 months.

■ To allow good documentation about the donor and its blood donation activities.

■ Support fast searching to find match blood bags for the right person.

**LIMITATIONS :**

■ This research study does not cover the actual blood collection activity, and actual blood.

■ transfusion operation. Blood donors and patients or recipients of blood donation are not system.

■ users, their registration or information will be encoded by the blood bank receptionist.

**CODE**

import pickle

def blood\_options():

global dict

global blood\_opt

*global blood\_grp*

while(1):

print("Select blood group of the person plz Enter one option:")

dict={1:"A+",2:"B+",3:"AB+",4:"O+",5:"A-",6:"B-",7:"AB-",8:"O- "}

for i in dict.keys():

print(" %d).%s"%(i,dict[i]))

blood\_opt=input("Enter blood number:")

if(blood\_opt.isdigit()):

if(int(blood\_opt)>0 and int(blood\_opt)<9):

break

else:

print("Enter only correct number")

else:

print("Enter only digits")

blood\_grp=dict[int(blood\_opt)]

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

def unlock():

xx=open("Blood\_Encription","rb")

yy=pickle.load(xx)

i=3

while(i>0):

print("You have %d chances"%(i))

i=i-1

password=input("Enter possword to Unlock::")

if(yy[0]==password) :

if(yy[0]==password):

print("You successfully

Unlocked\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

break

else:

print("Password is incorrect ...")

else:

print("If you forget your password Enter 1 else enter 0:")

mmm=1

while(1 and mmm):

pass\_forget=input("Enter your option:")

if(pass\_forget.isdigit()):

pass\_forget=int(pass\_forget)

if(pass\_forget==1):

nickname=input("Enter your nick name first to change password:")

if(yy[1]==nickname):

password1=input("Enter your new password:")

mkm=open("Blood\_Encription","wb")

pickle.dump([password1,nickname],mkm)

else:

print("Enter only digits")

def add():

while(1):

state=input("ENTER STATE:")

if(state.isalpha()):

break

else:

print("Enter only Alphabets")

district()

mondal()

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

while(1):

village=input("ENTER VILLAGE:")

If(village.isalpha()):

break

else:

print("Enter only Alphabets")

village=village.capitalize()

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

while(1):

o=0

name=input("ENTER NAME:")

for b in range(10):

if(name.startswith(str(b))):

o=1

if(o==1):

print("Digits are not allowed at Starting")

else:

break

name=name.capitalize()

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

while(1):

ph\_no=input("ENTER PH\_NO:")

if(ph\_no.isdigit()):

if(len(ph\_no)==10):

if(int(ph\_no[0])<=5):

print("Must be first digit is greatet than 5")

else:

break

else:

print("Enter 10 digits number")

else:

print("Enter only digits")

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

if(s123==1):

pass

else:

for i in m:

for j in i:

if(ph\_no==j):

print("\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*")

print("The Record/Ph\_no already exits")

return

while(1):

sta=input("Enter how many last records statement you want:")

if(sta.isdigit()):

if(int(sta)>0):

if(nn>int(sta)):

kkk+=(nn-int(sta)

print("enter only digits")

n=int(n)

if(n==1):

add()

elif(n==2):

search()

elif(n==3):

deletelast()

elif(n==4):

edit()

elif(n==5):

full\_details()

elif(n==6):

blood\_available()

elif(n==7):

all\_bloods()

elif(n==8):

statement()

else:

print("enter correct option")

**OUTPUT**

First set your password

Enter password:123

Enter your nick name:

nick name :rakshi

Successfully password Seted

You have 3 chances

Enter possword to Unlock::123

You successfully Unlocked

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

For add a Donater/Accepter details enter 1

For Search a Doneted person enter 2

For delete last record enter 3

For edit a record enter 4

For Get Full details of the of the person enter 5For check availability of one blood group

enter 6For check availability of All blood groups enter 7

For get the statement enter 8

enter your option:1

ENTER STATE:telangana

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

1-hanmakonda

2-warangal

3-karimnagar

4-siddipeta

5-khammam

SELECT DISTRICT:1

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

1-Hanamkonda

2-Khaazipet

3-Inavole

4-Hasanparthy

5-Velair

6-Dharmasagar

7-Elkathurthi

8-Bheemadevarapalli

9-Kamalapur

10-Parkal

11-Nadikuda

12-Athmakur

13-Damera

14-Shayampet

SELECT MONDAL:6

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

ENTER VILLAGE:devunoor

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

ENTER NAME:rakshitha

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

ENTER PH\_NO:6305249087

\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*Enter age of the Person:20

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

Select blood group of the person plz Enter one option:

1).A+

2).B+

3).AB+

4).O+

5).A-

6).B-

7).AB-

8).O

Enter blood number:4

\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*PlZ select one option

1-Donater

2-Accepter

Enter your option:1

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

Enter how much amount of blood in ML is

doneting/Accepting:700 -\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-

successfully added

-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-\_-

[Program finished]

You have 3 chances

Enter possword to Unlock::123

You successfully Unlocked

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

For add a Donater/Accepter details enter 1

For Search a Doneted person enter 2

For delete last record enter 3

For edit a record enter 4

For Get Full details of the of the person enter 5For check availability of one blood group

enter 6For check availability of All blood groups enter 7

For get the statement enter 8

enter your option:2

1-SEARCH BY DISTRICT

2-SEARCH BY MONDAL

3-SEARCH BY VILLAGE

4-SEARCH BY NAME

5-SEARCH BY NUMBER

6-SEARCH VIA RANDOM

SELECT OPTION:1

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

1-hanmakonda

2-warangal

3-karimnagar

4-siddipeta

5-khammam

SELECT DISTRICT:1

District

- Mondal

- Village

- Name - Ph\_no

hanmakonda

- Dharmasagar - Devunoor

- Rakshitha

- 6305249087

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-

Searching ended

[Program finished]

You have 3 chances

Enter possword to Unlock::123

You successfully Unlocked

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

For add a Donater/Accepter details enter 1

For Search a Doneted person enter 2

For delete last record enter 3

For edit a record enter 4

For Get Full details of the of the person enter 5For check availability of one blood group

enter 6For check availability of All blood groups enter 7

For get the statement enter 8

enter your option:5

Enter phone Number:6305249087

VILLAGE

NAME

PH\_NO

Devunoor

Rakshitha

6305249087

Full details are----

STATE : telangana

DISTRICT : hanmakonda

MONDAL : Dharmasagar

VILLAGE : Devunoor

NAME : Rakshitha

**Conclusion**

* The researchers assume the following assumptions:
* Internet connectivity is needed for the online blood management system .
* Internet speed may affect the perception of the systems users with regards to the system effectiveness and efficiency.
* Blood transfusion should be performed by medical or professional doctors only.
* The over-all safety depends on the success of the medical operation.
* The researchers identify the following hypotheses:
* There is a significant difference in the level of blood transfusion safety between manual-based and online blood bank systems. There is an increased level of blood transfusion safety in using online blood bank management systems while there is an increased risk when using manual-based on.

**FUTURE SCOPE**

This research study covers the three (3) basic operations of blood banks, namely: donor registration, monitoring of blood bags or products’ inventories, and monitoring of blood bags or products’ issuance. Also, due to time-constraint, respondents will be from hospitals from North Batinah Region in the Oman, though the research study talks about blood banks in the Sultanate of Oman. In addition, the study considers three (3) possible users of the system, namely: hospital administrator, doctors, and blood reception LIMITATION.

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