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LIFEBLOOD GUIDANCE SYSTEM

Ms.Keerthana S[1], Madhumitha M[2], [3]Alekhya N[2]

[1]Assistant Professor, Dept of Information Technology,Vel Tech High Tech Dr. Rangarajan Dr.Sakunthala Engineering College, Chennai, Tamilnadu, India
[2,3] UG Student, Dept of Information Technology, Vel Tech High Tech Dr. Rangarajan Dr.Sakunthala Engineering College, Chennai, Tamilnadu, India

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Abstract - *The Online Blood Bank Management is primarily concerned with people who want to donate blood to patients. It will be easier to discover a donor for a certain blood type and to establish a relationship between the donor and the blood bank using this approach. The primary goal of developing this application is to formalise the blood donation process and encourage donors to donate blood. This programme allows those who need to donate blood to register, and people who require blood donors to search for and find blood donors. Following the search, a list of contributors will be provided, with information on their contact information so that they may easily engage with them. This application can only be used by registered people who are willing to donate blood. This study presents a practical method for locating donors who are close to the seeker's location. When a person needs blood, he or she should submit a request via a mobile application, which will be available to all registered donors. The donor can change the status in this application once the blood donation is completed. Verification of user registration can be done using OTP (One Time Password).*

***Key Words*: Online blood donation, Android application, Donors.**

1. INTRODUCTION

Blood is an essential element of everyone's life; it circulates throughout the body and transports vital components like oxygen and nutrition to the body's cells. There is no substitute for blood, which cannot be manufactured or created. Blood donors are the only source of blood for patients.

The average blood donation volume is 470 millilitres per individual. In the hospital, when a patient requires blood that cannot be delivered on time due to unfavourable conditions. Due to a lack of communication and other help, even if the donor is accessible in the hospital, patients are unaware of it. The system is necessary to bridge the communication gap between blood banks, and donors. This project was created with the goal of allowing users to view nearby hospitals, blood banks, and donor locations. In this case, We are given a security with authentication project. Users must first login if they are already registered; otherwise, they must first register before proceeding to login. This project will require internet access during the entire duration. This method will ensure that blood is available to the patient in the event of an emergency. This study focuses on the Online Blood Donation Management System, an Android application that allows donors and seekers to communicate. This method's primary goal is to generate e-Information on donors who are interested in donating or receiving blood.

2. LITERATURE REVIEW

In Paper [1] centred on the Online Blood Donation Management System, an android application with a companion mobile app that serves as a communication mechanism between patients (who require blood) and donors.. In paper [2] author focused on the people in need of blood, the information of the registered person displays in a mobile application. The user will be given directions to the desired place, or we can contact the donor directly, eliminating the need for him to ask manually. We employ GPS technology to track donors who are willing to donate blood in this scenario. This process, as they can see, will take less time.

In Paper [3] author targeted on Clients can examine data regarding enrolled blood contributors like name, address, and other such close to home data alongside their subtleties of blood bunch and other clinical data of benefactor using the Android Blood Bank framework.. The project also features a login page where the client must register in order to view what blood is available and to sign up to give blood if he or she so desires. [4] author focused on designing this technology is to cut down on the amount of time spent looking for the proper donor and the amount of blood that is needed. As a result, the suggested system immediately offers the necessary information and aids in quicker decision-making.

In paper [5] author focused an Android application that allows the user to search for members of a specific blood group based on their

location in a short period of time. This programme will not only display a list of donors, but it will also track the location of nearby donors and send SMS alerts to them, ensuring that the patient receives blood as quickly as possible. To donate blood using the application, one must first enlist by providing all of the required details. These nuances must be meaningful and genuine in order to be followed in an emergency. The contributor will be added to the list of registered givers once the Admin has approved all of the data.In Paper [6] author The goal is to provide clarity in this field, to make the process of collecting blood from a blood donation centre clean, and to make the blood donation centre administration system effective.

3. EXISTING SYSTEM

People are quite busy in the current system looking for blood in an emergency. Some people may discover it, while others may not be able to discover it when they need it. Furthermore, there is no data confidentiality, which could lead to a security risk in the future. When blood is required in an emergency, users can search for a nearby blood bank. With the help of the city and the needed blood group, blood seekers can find a nearby blood donor. The blood donation's most recent update date could not be included.

LIMITATION OF THE PREVIOUS SYSTEM:

- Uncertainty of Donor availability.
- Less secure.

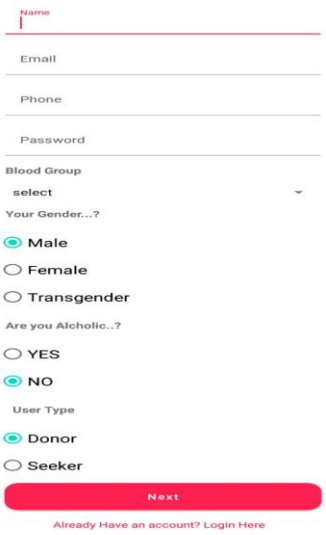
3.1 PROPOSED SYSTEM

The proposed system is to construct an Android application that allows donors who want to donate to simply find me when I need them. When a seeker requires blood, he or she will make a request. This request will be communicated to the donor through the application as a message. This project was created to assist persons in need by displaying nearby blood donors who are willing to donate blood. Donors who do not want to donate blood can hide their information in this application. We can look for blood donors based on the distance the seeker is willing to travel.

4. RESULTS AND DISCUSSION

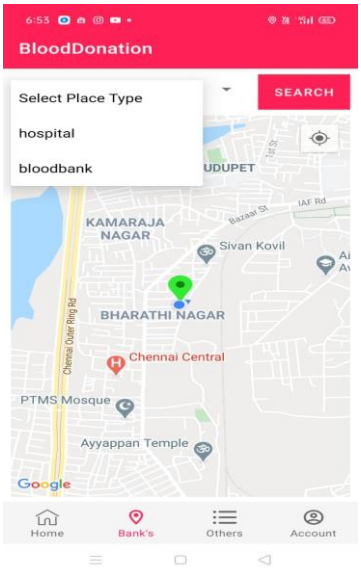
Module 1: Seeker and Donor Registration

The application requires blood donors and seekers to register, and the OTP must be validated throughout the registration process. They will register using this app by providing information such as their name, email, phone number, and password, blood group, gender and alcholic or non-alcholic and the users can register as donor or seekers.



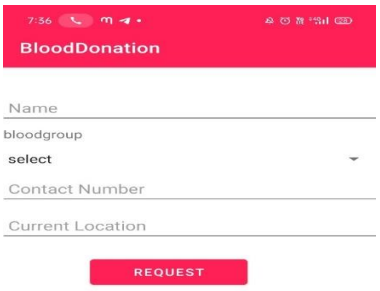
Module 3: Search Nearby blood bank

In the event of an emergency, doctors will look for a local blood bank. If this is not possible, the patient's family should look for neighbouring relatives and acquaintances who share their blood group. In the second module, the seekers will look for blood in a blood bank that can be accessed in an emergency.



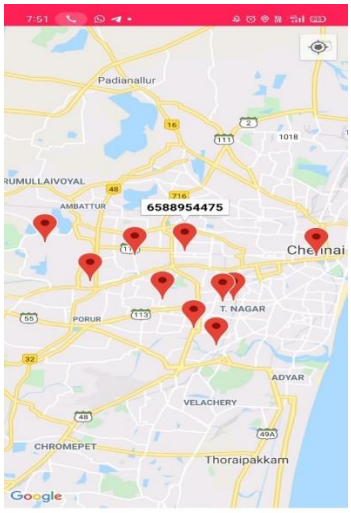
Module 3: Seeker's Request

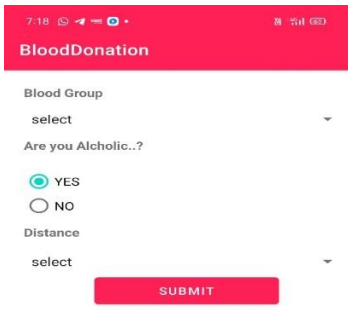
The seeker will place a blood request in this module, and the information will be shared with all donors.



Module 4: Search Nearby by Donor

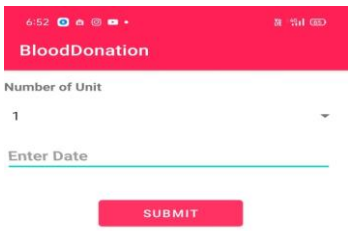
In the event of an emergency, the seeker might look for a local donor willing to donate blood. We may search for blood donors based on their distance from the seeker, which ranges from 1 to 5 kilometres, and all donors are displayed on the map.

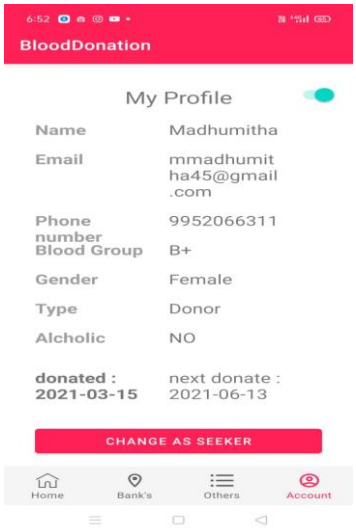




Module 5: Update Donation Status

The most recent blood donation date will be noted, and the next blood donation day will be suggested.





5. CONCLUSION

The Android application provides a way for medical clinics and blood donation centres to communicate and synchronise. It also gives them the ability to communicate with nearby contributors in times of disaster. The data set is critical to the framework's success. The information bases of emergency clinics and blood donation centres should be verified for consistency on a regular basis to ensure that the framework runs smoothly. The suggested framework makes use of Google Maps to provide the client with a simple way to locate nearby givers/blood donation centres. Because the Android application was produced with Android Studio, an open source programming tool, the framework that was constructed is highly believable.

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