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Android Based Smart Blood Bank Application

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ABSTRACT: The majority of people are eager to learn more about online blood donation for patients. The bank's main goal is to provide blood to patients who have had a borderline introduction issue. Blood is a very crucial medical supply, therefore it's to be controlled carefully. Patients must be urged to have blood drawn in an emergency. Individuals are now needed to understand how to contact blood donors via the internet. This system enables users to obtain blood at critical times to extend their life span. The blood matchmaker system is governed by rules that use a Decision Tree and a multidimensional language. The technology has saved information on donors and patients so that blood may be given out quickly.

KEYWORDS: Android, Java, Firebase, Application, Blood bank, Blood transfusion.

I. INTRODUCTION

The primary objective of this research is to prevent people from risking their lives by donating blood. Our concept is a reasonable blood bank system using automation that allows users to access information about nearby hospitals, blood banks, and volunteer donors. This application also provides information about nearby blood donation sites. This tool significantly decreases the time spent sorting requested blood through blood banks and hospitals. Within the medical industry, blood could be a vital aspect. There is a need for blood for a variety of causes; blood is obtained from willing donors.

There are four different types of blood teams. Blood is made up of many different elements such as plasma, platelets, and so on. Depending on the condition, different types of blood elements are provided to the patient. Each of these will be used to cure several disorders. The people 'O' is understood as blood donors as a result of it being transfused to anyone, while the AB individuals are viewed as the universal acceptor.

II. LITERATURE SURVEY

The term "blood bank system" refers to the process of collecting, processing, and storing blood for later use in transfusions. Transfusion is a very common operation that is performed on people of all ages. Many people undergoing surgery will require blood transfusions as a result of blood loss during their treatments.

[1] The author it is made up of two modules: a processing module and a packet account module, and it is based on a bank system. The info process module answers to the user's request, while the packet count module monitors the blood sample supply.

[2] The author projected the system would support RFID and an omnipresent device network. The system aids in the verification of an error-free transfusion process. This methodology was created and proven to be reliable for reporting the temperature of blood packets and tracking the location of blood bags. The system's LTS unit was beneficial in tracking the situation of moving blood banks, and the time required by medical personnel was decreased.

[3] The author proposed that a website be created that contains information about a specific space's blood stock. It makes use of PHP is used to create the website and my SQL is used to store the data. When a hospital requires blood, the hospital must fill out the necessary information on the bank's website. Based on the information provided, the website can display the amount of blood stock available at various blood banks throughout a specific geographic area.



[4] The author predicted that the system would use the asterisk hardware to offer direct decision routing. The Asterisk software system transforms a standard computer into a communication server. When a blood seeker creates a fee variety, the bank has information that can be stored in the Centre server. When a blood seeker creates a fee variety, the blood seeker can be connected to a donor choice, and information about the blood seeker can be sent to the donor on his mobile phone.

[5] The author projected the system is developed to use for the effective management of bank supported the RFID. The technology decreases the number of transfusion errors by continuously tracking the bank's inventory in real time and doing cross checks at several locations to ensure that the correct transfusion procedure is used.

III. METHODOLOGY

The user has to first download the smart blood bank application. He/she will have to be registered to use the features of the application. If the person has already registered, then he/she directly goes to the home page. If not, users have to register with the application and fill in the basic details like name, address, contact, blood group, email id, location, etc.

a) Android

Android is a mobile operating system designed primarily for touchscreen mobile devices such as smartphones and tablets.

b) Java

Java is a High Level, class-based, an object-oriented programming language that is designed to have as few implementation dependencies as possible and It's used to intended to let application developers write once, run anywhere.

c) Firebase

Firebase is a platform developed by Google for creating mobile and web applications.

IV. MODELING AND ANALYSIS

1. For developing the Blood bank application, we used Android Studio 4.1.
2. Figure 1 shows the system architecture of the blood bank application. In this, only the admin can access the database of the application and the admin can update the database.
3. Users have to first register in our application to use its function. In this user can easily find the blood donor near him and get all *the contact* detail of a valid donor.

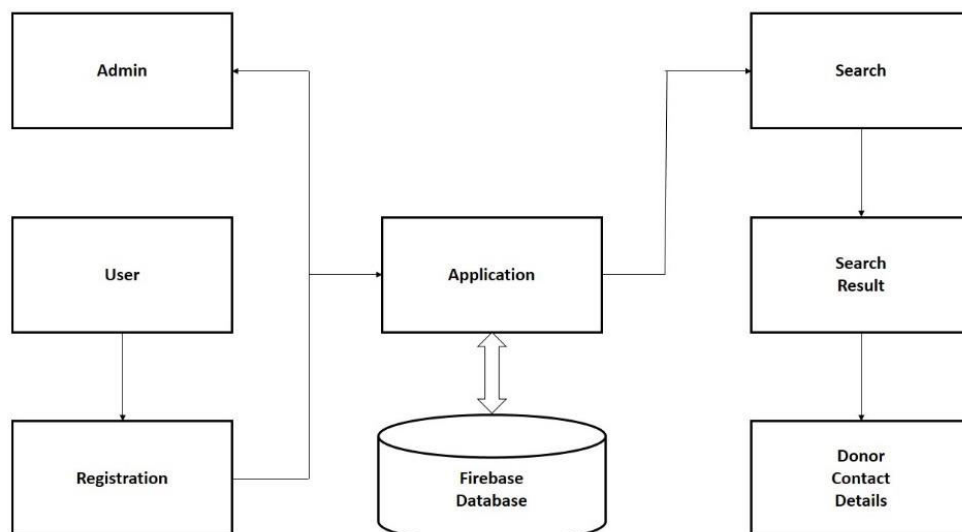


Figure:1 System Architecture



4. Figure 2 is the flow diagram of our application. It shows the process of requesting blood.
5. It's shown the registration process if the user has a valid email id only then it's allowed to log in.
6. The user can send a request or accept the request for a blood donor. If the sender gets a blood donor our application gives the contact detail of the donor to a user.
7. If the user fails to contact the donor then the user will research to get a new donor.
8. The user has to offer permission for the location to get proper results.
9. Users can also find the nearby hospitals in our blood bank application.

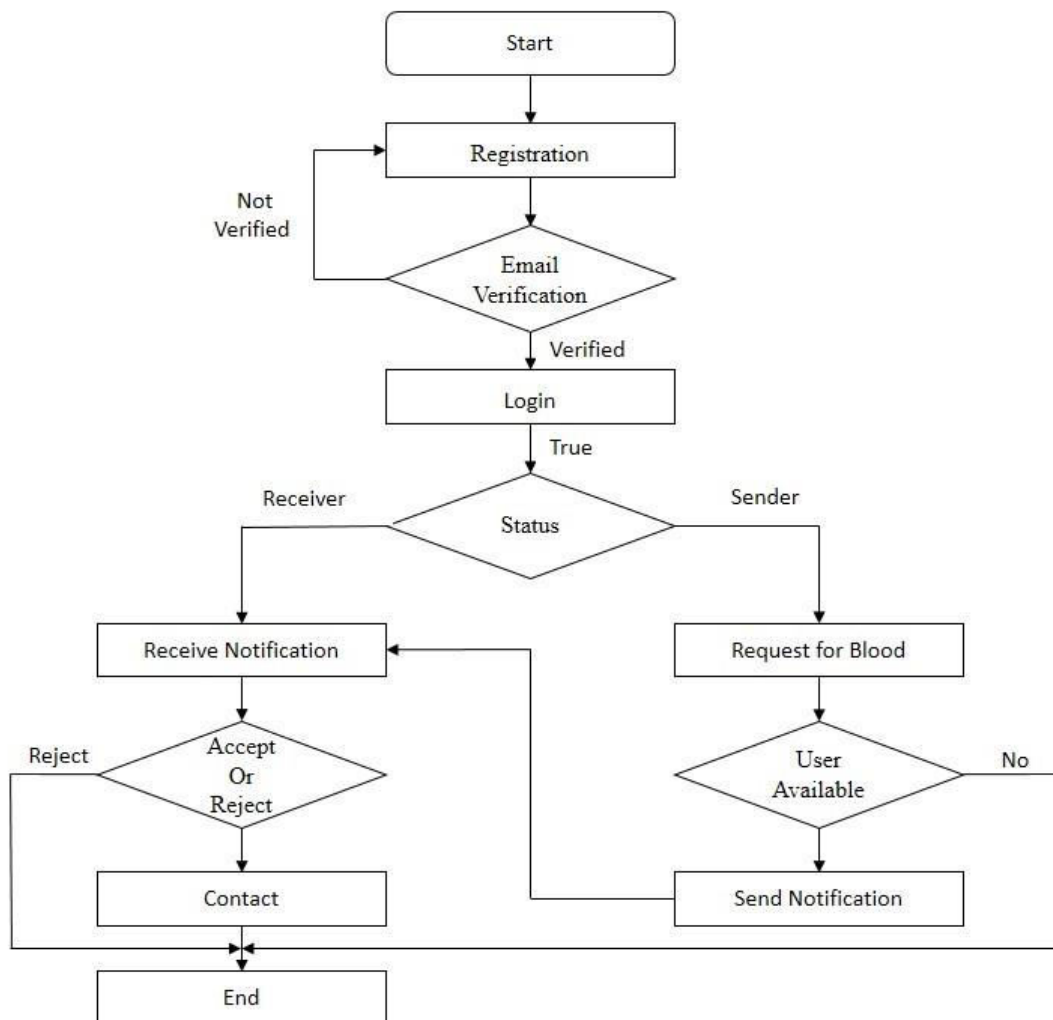


Figure: 2Flowchart



V. RESULTS AND DISCUSSION

The final project will result in a real-time blood bank application that gives users to accept requests or sent a request for a blood donor. Users can find different blood group people in our application. In this application, the user can find the contact detail of the donor or nearby hospitals.

In Figure 3 users can log in with their registered email id and password.

Figure 4 allows users without an account to fill in their contact detail and register with their email and password or google email id to gain access to the application functions.

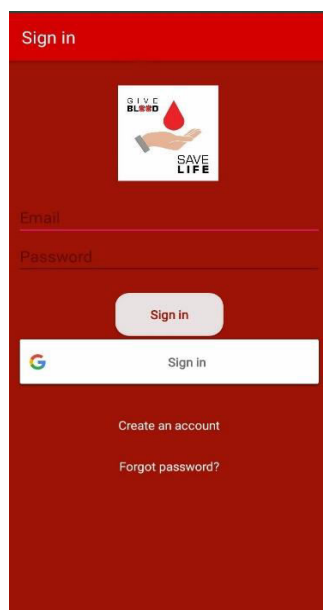


Figure: 3 Login Page

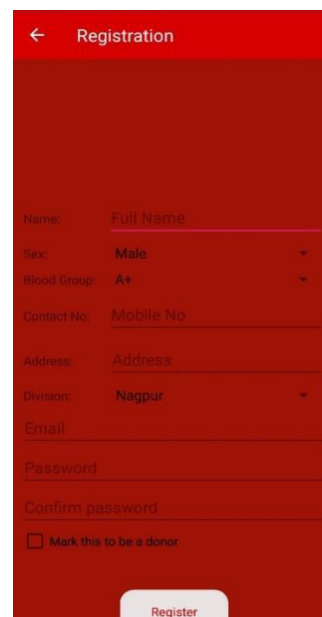


Figure: 4 Registration Page

VI. CONCLUSION

The Android project, which is mostly used in emergencies, allows mobile users to access all information about blood donors. This application serves in the online selection of nearby hospitals, blood banks, and donors by tracing their location using GPS and providing the needed data in less time. It also supports the faster, higher cognitive process.

REFERENCES

- [1] G. Muddu Krishna; S. Nagaraju (2016), "Design and implementation of short message service (SMS) based mostly blood bank", 2016 International Conference on ingenious Computation Technologies (ICICT)
- [2] Do-Sung Kim, Sun K. Yo, HO Kim, BC, Chang,HS Bae, SJ Kim(2007), "Location-based mostly Blood Bag Management victimization active RFID and omnipresent sensing element Network ",6th International Special Topic Conference on ITAB, 2007, Tokyo
- [3] WijaiBoonyanusith; PhongchaiJittamai (2010), "The Development of Web-Based System for Blood Requisition inside Blood offer Chain", 2010 Seventh International Conference on info Technology: New Generations.
- [4] Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul(2012) "Automated on-line bank database", 2012 Annual IEEE Republic of India Conference (INDICON)
Adarsh N, Arpitha J, Md. Danish Ali, Mahesh Charan N, Pramodini G Mahendrakar (2014) "Effective bank Management supported RFID in Real-Time Systems", International Conference on Embedded Systems - (ICES 2014)



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