

Smart Blood Bank Application

Ms. Mausami Sawarkar¹, Sandeep Singh², Kamlesh Sonkusare³, Adesh Gonnade⁴,
Mohd Ariz khan⁵

¹ Associate Professor, Department of Computer Science and Engineering, Priyadarshini J.L College of Engineering, Nagpur, Maharashtra, India

^{2,3,4,5} BE Scholar, Department Computer Science and Engineering, Priyadarshini J.L College of Engineering, Nagpur, Maharashtra, India

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 very crucial medicinal supplies, 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 in order to extend their life span. When blood is required at the hospital, it is frequently not available on time, resulting in inconsistencies. Patients and donors are both unaware that the donor is available in the hospital due to a lack of communication and other help. A system like this is necessary to bridge the communication gap between hospitals, blood banks, donors, and receptors. The average blood donation volume is 470ml per individual, which is only 8% of the volume of an adult. This project was created with the goal of allowing users to view the knowledge of surrounding hospitals and blood banks, as well as the three key views of the hospital, blood bank, and patient/donor. 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. To use the project, you'll need access to the internet. We've built security into this system by requiring users to login if they're already enrolled, or to register according to their form of viewpoint if they're new.

Keyword: - Android, Java, Firebase, Application, Blood bank, Blood transfusion.

1. 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 a number of disorders. The people 'O' are understood as blood donors as a result of it being transfused to anyone, while the AB individuals are viewed as the universal acceptor.

2. METHODOLOGY

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

2.1 Android

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

2.2 Java

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

2.3 Firebase

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

3. MODELING

1. For developing Blood bank application, we used Android Studio 4.1.
2. Figure 1 shows the system architecture of blood bank application. In this, only admin can access the database of the application and 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 contact detail of a valid donor.

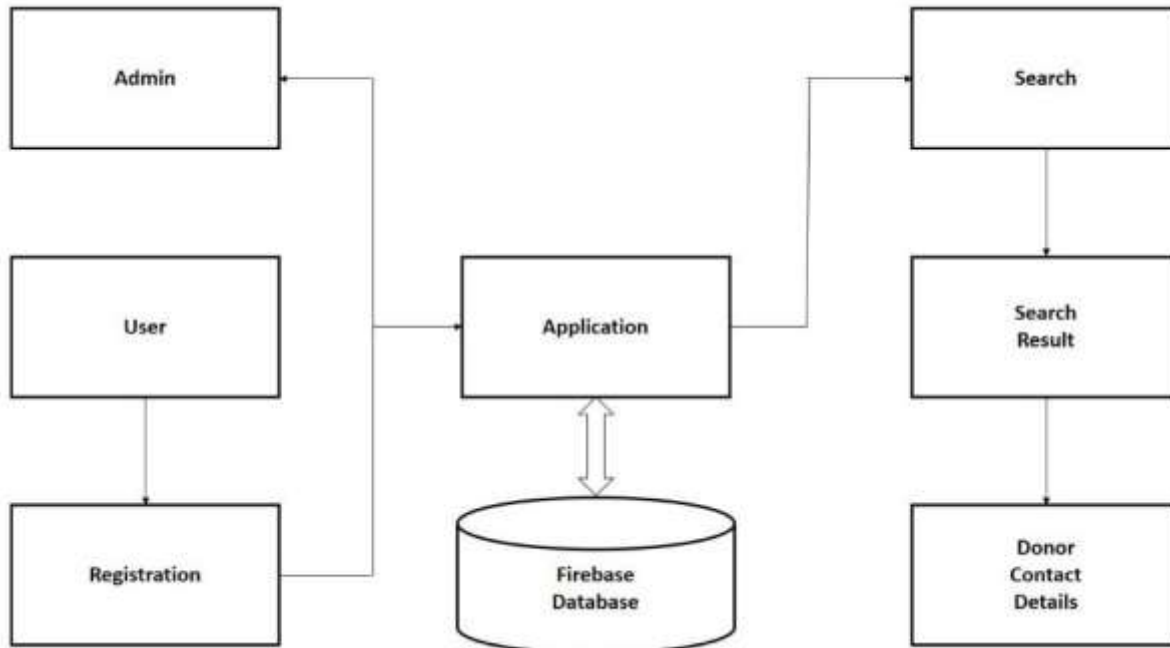


Fig -1: System Architecture

4. Figure 2 is the flow diagram of our application. It shows the process of requesting for blood.

5. It's shown the registration process if the user have a valid email id only then it's allow to login.
6. The user can send a request or accept the request for blood donor. If the sender gets a blood donor our application gives the contact detail of the donor to user.
7. If the user fails to contact with the donor then user will research to get a new donor.
8. The user has to offer permission for the location to get proper results.
9. User can also find the nearby hospitals in our blood bank application.

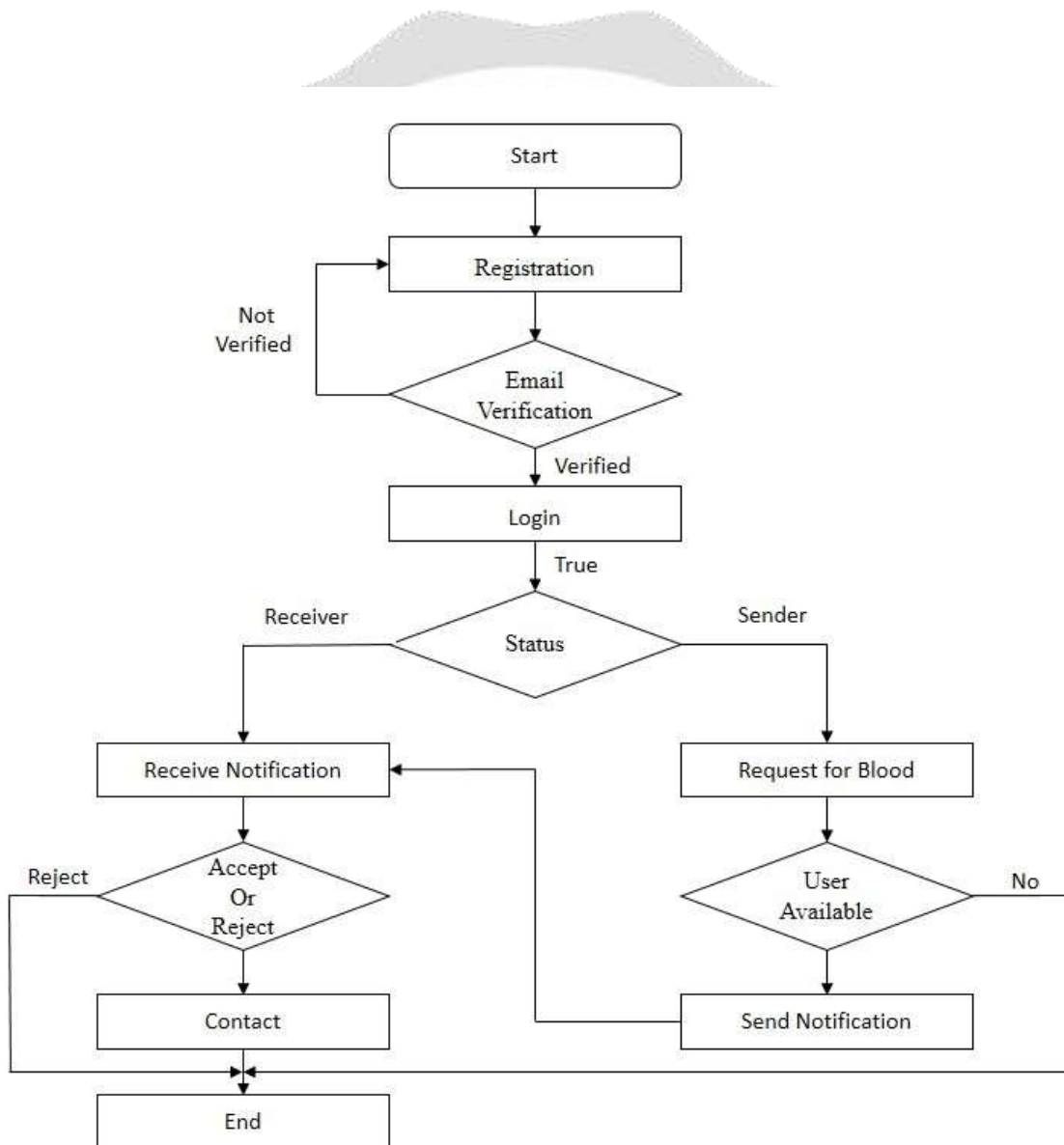


Fig -2: Flowchart

4. RESULTS AND DISCUSSION

The final project will result as a real time blood bank application which gives the users to accept request or sent request for blood donor. User can find different blood group people in our application. In this application user can find the contacts detail of the donor or nearby hospitals.

In Fig -3 users can login with their register email id and password.

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

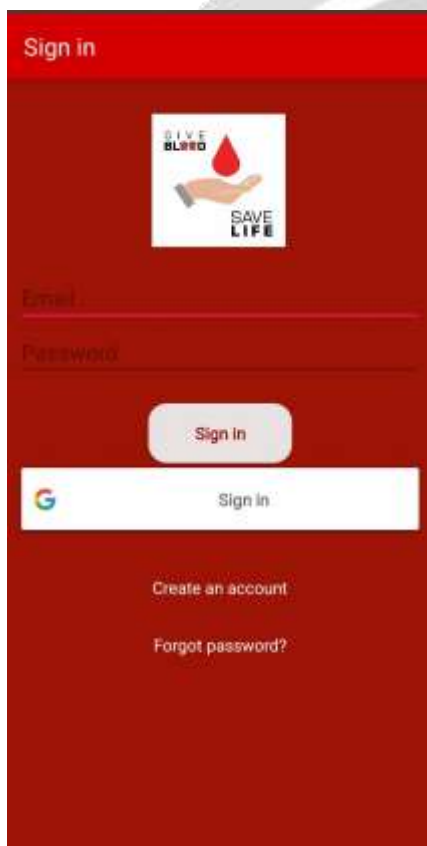


Fig -3: Login Page



Fig -4: Registration Page

5. CONCLUSIONS

The Android project, which is mostly used in emergency situations, 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 in the faster higher cognitive process.

6. REFERENCES

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