



ANDROID APP FOR BLOOD DONATION

Mr. Abhijith Anoop¹, Mrs. V. Abinaya²

¹Student of Department of Commerce with Computer Applications, Dr. N.G.P. Arts and Science College
(Autonomous), Coimbatore, Tamil Nadu

²Assistant Professor, Department of Commerce with Computer Applications, Dr. N.G.P. Arts and Science College
(Autonomous), Coimbatore, Tamil Nadu

ABSTRACT

A blood donation app is a mobile application that aims to connect potential blood donors with patients in need of blood. The app has several objectives, including increasing blood donations, saving lives, educating the public, addressing blood shortages, reaching a wider audience, increasing efficiency and fostering community engagement. By taking the advantage of the power of technology, a blood donation app can simplify the process of blood donation and help ensure that patients receive the blood products they need in a due course. The app can also be a valuable educational tool, providing information about blood donation. The app also helps its users to track the last time they donated blood and when they can donate again. Overall, a blood donation app has the potential to increase blood donations and save lives, while also promoting safety, and community engagement.

I. INTRODUCTION

Blood donation is a critical aspect of modern healthcare, providing life-saving blood products for patients in need of transfusions. Although avid importance has been provided on the need of blood donation, there are often shortages of blood products in many parts of the world, highlighting the need for innovative solutions to increase blood donations. One such solution is the development of a blood donation app, a mobile application designed to connect potential blood donors with patients in need of blood transfusions. A blood donation app can be a powerful tool for increasing blood donations and saving lives. By making the process of donating blood more accessible and convenient, the app can encourage more people to donate blood and help address the ongoing shortage of blood products in many parts around the country.

II. SYSTEM REQUIREMENTS

Software Requirements

JAVA

Java is a widely used programming language known for its portability, security, and object-oriented design. Introduced by Sun Microsystems in 1995, it is popular for developing desktop software, web applications, and mobile apps. Java's scalability makes it ideal for large-scale projects and it is used by many large corporations, including Amazon, Google, and IBM. With an estimated 9 million Java developers worldwide, the language is known for its ease of use, extensive libraries, and ability to run on multiple platforms without recompilation.

Google Firebase

Google Firebase is a mobile web application development platform that offers various features such as real-time database, user authentication, cloud storage, hosting, and analytics. Introduced in 2011, acquired by Google in 2014, its ease of use, its scalability has made it a popular choice for developers. The Firebase real-time database allows real-time transactions of data across multiple clients, making it ideal for building real-time apps such as chat apps and games, while its user authentication feature provides the user secure use. Firebase continues to evolve, constantly to suit the changing needs of developer's new features have been added.

Android Studio

Android Studio is an Integrated Development Environment (IDE) for growing Android packages. It is a free and open-source platform evolved by Google, and it offers a complete set of gear for building Android apps with current UI and robust capability.



Android Studio supports Java, Kotlin, and C++ programming languages and comes with a human-friendly interface builder, a powerful emulator for trying out apps, and integration with Firebase for mobile and internet app improvement.

In addition to its capabilities, Android Studio gives a range of plugins that make bigger its talents and permit builders to customize their workflow. It includes features for optimizing app performance, such as reminiscence profiling and code inspection, which help builders identify and clear up overall performance issues. Android Studio also consists of a visual format editor, which permits builders to create complicated consumer interfaces by dragging and dropping UI factors onto a canvas.

Hardware Requirements

The laptop used in this project has a 64-bit version of the Windows 11 operating system, which further increases the computing capacity of the system and provides a more efficient and user-friendly interface. This laptop is also powered by an AMD Ryzen 5 4600H processor with Radeon Graphics. The system is equipped with 16 GB of RAM, enabling efficient multitasking and handling complex applications. Additionally, the laptop features a 512 GB SSD and a 1 TB HDD, providing plenty of storage for various applications and data.

III. SYSTEM STUDY

Existing System

The existing system has proven to be less user-friendly and less effective in promoting blood donation. For example, users would have to manually search for blood camps or blood centres in their area without the aid of a GPS-enabled location feature. Similarly, users would have to manually track when they last donated blood without the assistance of an automated tracking system.

Disadvantages of Existing System

- The existing system does not have the features to help users locate blood camps or blood centres in their area, making it difficult for individuals to find convenient locations to donate blood.
- The existing system does not have the features to connect blood donors to potential blood seekers.
- The existing system does not have the features which allows the user to track the previous time they donated blood.

Proposed System

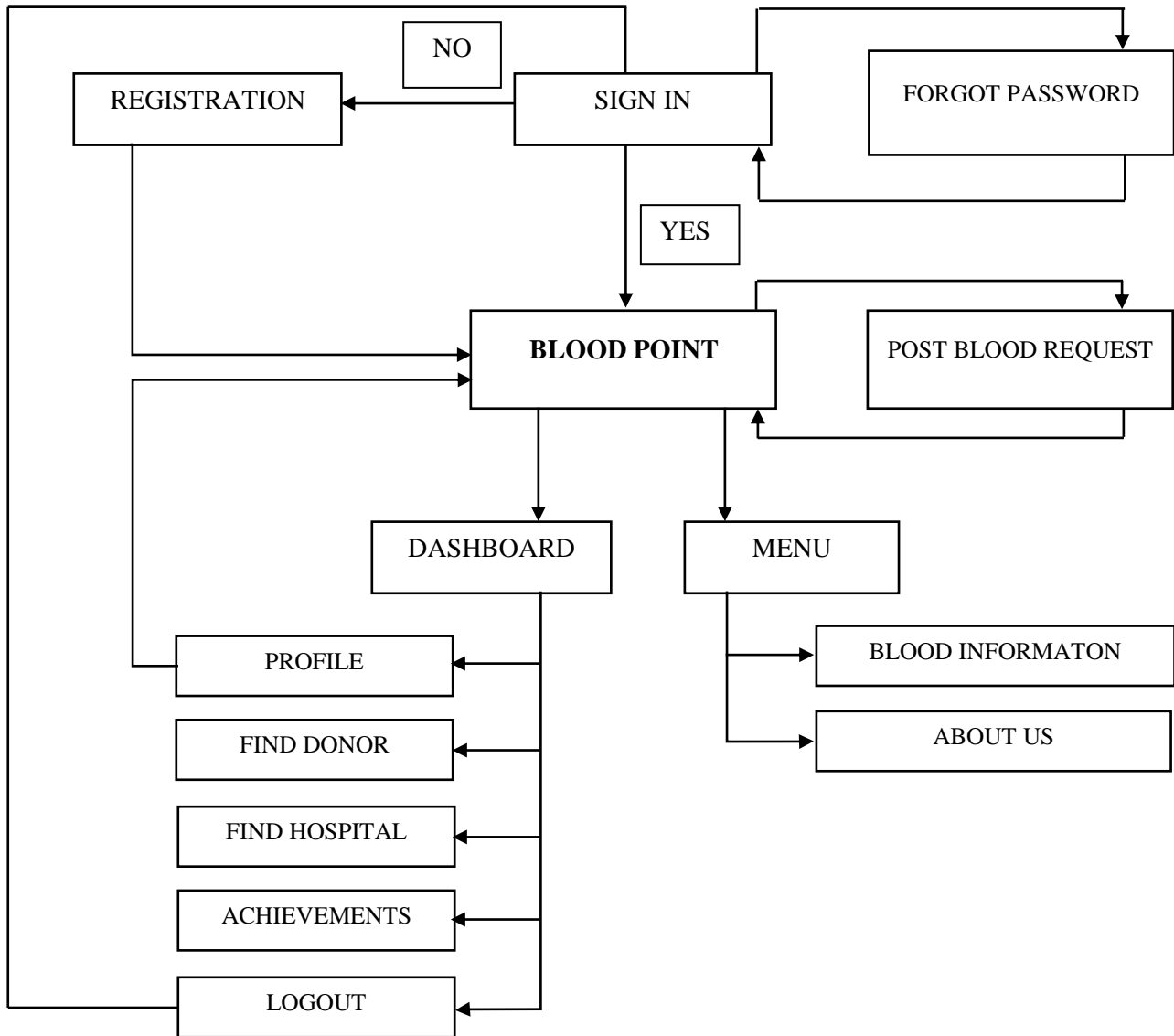
The proposed blood donation app offers a user-friendly interface, personalized experience, enhanced donor recruitment and improved accessibility. Users can easily create and update their profiles, track their last blood donation. The app promotes inclusivity, encourages regular donations from existing donors, and provides a sense of purpose and fulfilment by connecting users with potential recipients.

Advantages of Proposed System

- Users can easily create and update their profiles, track their last blood donation, and locate nearby blood camps or centres using Google Maps API.
- The app offers personalized updates about blood donation opportunities and needs in the user's area, making the donation process more meaningful and fulfilling.
- Tracking of the last blood donation makes it easier to recruit new donors and encourage regular donations from existing donors.

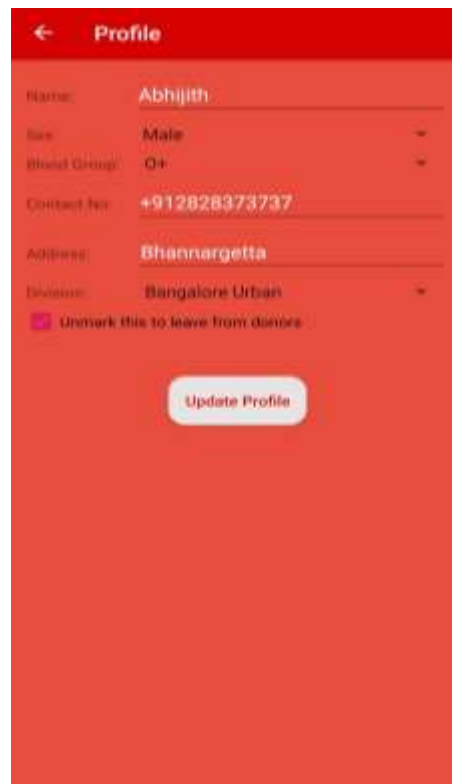
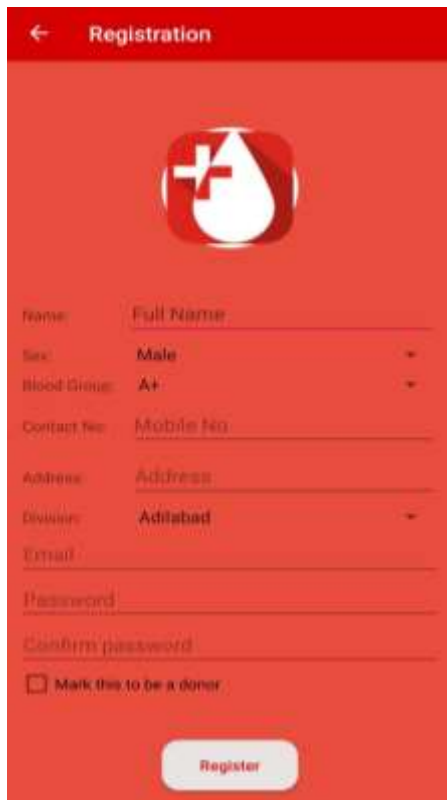


IV. SYSTEM DESIGN





V. SAMPLE PROJECT PROCESS





VI. CONCLUSION

The blood donation app is a revolutionary platform designed to simplify the blood donation process and make it easier for donors to connect with recipients in need. By offering a range of features and integrating with Google Maps, the app has the potential to significantly increase the number of successful blood donations and save countless lives in the process. With its user-friendly interface and powerful tools, the blood donation app represents a major step forward in the fight against blood shortages and the promotion of public health.

- The integration of the Google Maps API allows users to easily locate nearby donation centres and blood drives, providing an added layer of convenience and accessibility.
- By increasing the number of successful blood donations, the app has the potential to save countless lives and make a significant impact on the healthcare industry as a whole.

VII. REFERENCES

1. www.developer.android.com
2. www.stackoverflow.com
3. www.quora.com
4. www.github.com
5. www.youtube.com