Dhamni: Connecting Blood Donors and Recipients within Delhi University

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Introduction

Dhamni is a mobile application that aims to connect blood donors and recipients within Delhi University. With approximately 6.7 lakh students and 9,000 teaching staff, there is a large pool of potential donors. However, a centralized platform is lacking to effectively connect donors and recipients. Dhamni serves as a common platform for all blood donation societies and NSS teams in different colleges. The app features a user-friendly interface, real-time updates, donor profiles, and integration with blood banks. By showcasing these features, Dhamni can create a close-knit community of donors and recipients within the university, providing a much-needed service for those in need of donated blood.
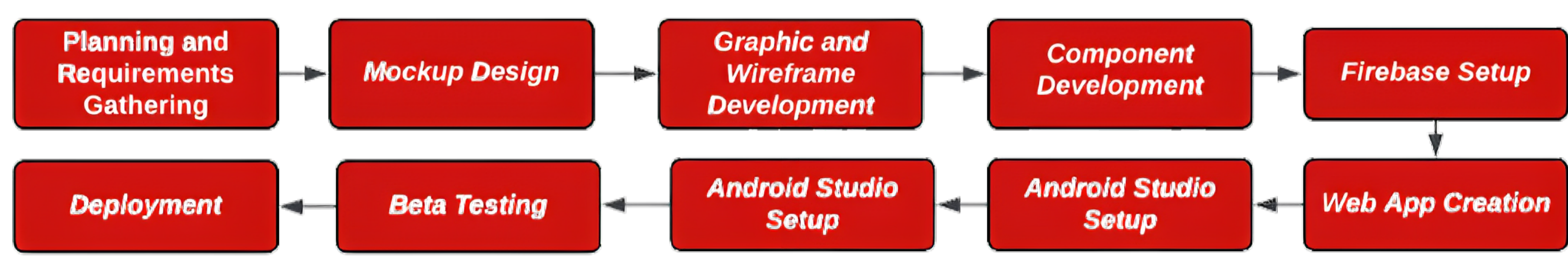
Benefits

1. Faster access to blood: Dhamni enables users to easily locate potential blood donors in their area, reducing the time and effort required for the search.
2. Increased blood donation drives: Dhamni can connect blood donation societies and NSS teams with a larger pool of potential donors, resulting in more frequent and successful blood donation drives.
3. Improved safety and security: The two-factor authentication and captcha verification features of Dhamni help prevent fraudulent registrations and ensure the safety and security of users.
4. Customizable search: Dhamni's customizable search function allows users to filter donors by blood type and location, helping them find compatible donors more efficiently.
5. Easy to use: Dhamni's user-friendly interface makes it easy for donors and recipients to navigate the app and connect with each other.
6. Community building: Dhamni can help build a sense of community among Delhi University students and staff by providing a platform for them to come together and support each other during times of need.

Key Features

1. Centralized platform: Dhamni provides a centralized platform for blood donation societies and NSS teams to connect donors and recipients within Delhi University, making it easier to organize blood donation drives and find donors.
2. Two-factor authentication: Dhamni uses a two-factor authentication process to verify users' phone numbers and prevent fraudulent registrations.
3. Captcha verification: To prevent automated registration requests from crashing the application, Dhamni uses captcha verification.
4. User-friendly interface: Dhamni's interface is designed to be user-friendly, making it easy for donors and recipients to navigate the platform and connect with each other.
5. Customizable search: Dhamni allows users to customize their search for donors based on specific blood types and locations, making it easier to find compatible donors quickly.
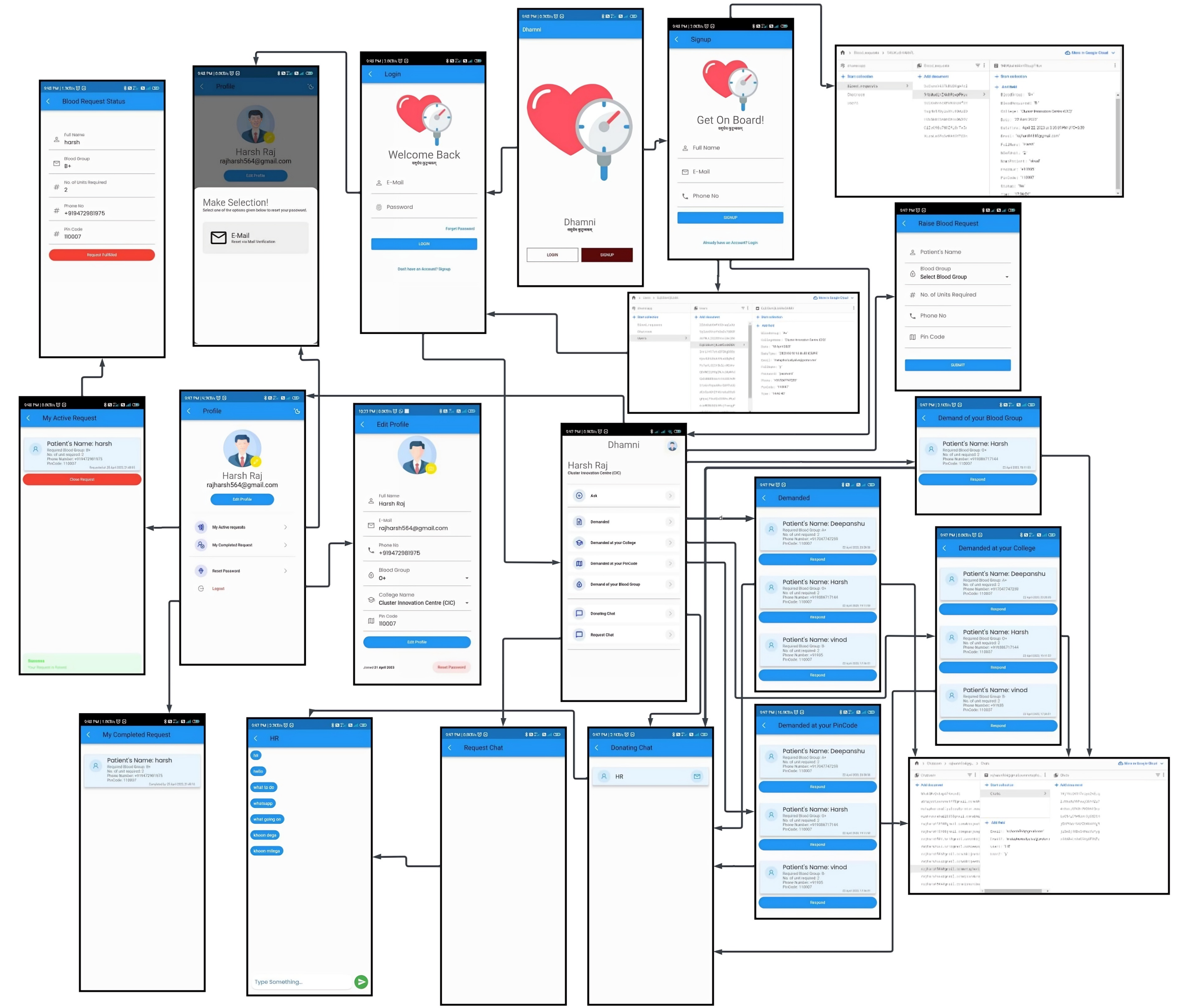
App Flowchart

Methodology

User Scope

Number of College	Number of Students	Teaching Staff
62	2,61,400	7,015
Number of Faculties	Number of Students	Teaching Staff
11	1,15,400	2,260
Number of Centre	Number of Students	Teaching Staff
17	340	150

Future Scope

1. Collaborating with existing Pathology labs and Blood Banks to provide the facility of blood donation at your doorstep to encourage more people to donate blood.
2. Integration with Google Maps API to allow users to locate nearby blood donation centers and hospitals.
3. Integration with social media platforms to encourage more people to register as blood donors and spread awareness about the importance of blood donation.
4. Adding additional security measures such as two-factor authentication to ensure the privacy and security of user data.

Challenges Faced

1. Technical Challenges: Developing the Dhamni blood donor app faced challenges with integrating APIs, authentication, compatibility.
2. User Adoption: User adoption challenges due to privacy, awareness. Targeted marketing planned.
3. Safety and Security: Ensured data safety via two-factor auth, captcha. Addressed security vulnerabilities.
4. Resource Constraints: Managed resource constraints, balanced demands. Leveraged networks for team, resources.
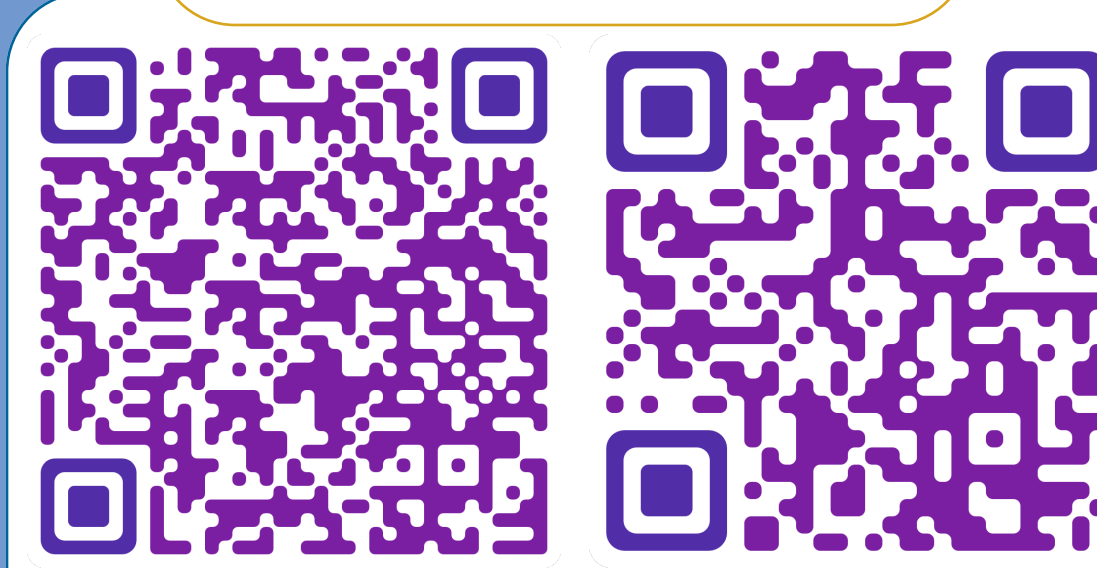
Tools Used

Firebase

Apps Similar to Dhamni

SIMPLY BLOOD
blood
KHOON
bloodconnect

References

1. Flutter: https://flutter.dev/?gclid=CjwKCAjwl6OiBhA2EiwAuUwWZUFWA96lAhZ9jnolSj7MeF_4a3hKfTSVhrMV2Dm7jYy7ZHY5ofla8xoCpfgQAvD_BwE&gclsrc=aw.ds
2. Dart Packages: https://dart.dev/tools/pub/cmd/pub-get
3. Firebase Console: [1] https://console.firebase.google.com/u/0/

Appendix

Download our app

Take a look on our code