

Blood Donation Mobile Application

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Summary

To create a mobile app that connects blood donors with recipients and facilitates blood donation. Increased blood donation rates, improved accessibility to blood donations, and a user-friendly platform for both donors and recipients. This application makes people interested in donating blood.

Introduction

- Safe blood saves lives. There is a constant need for a regular supply of blood because it can be stored only for a limited period of time before use. Regular blood donation by enough healthy people is needed to ensure that blood will always be available whenever and wherever it is needed. Through blood donation application, a blood donation community will be developed where the required blood donor can be found very easily. Blood donors can be found from different locations for a sick patient

◆ Project Objective and Goals:

- Enhance Blood Availability: Ensure a steady supply of blood by connecting donors with recipients and donation centers, addressing critical shortages.
- Goal: The main aim of Blood Donation App is to help the patient to easily communicate with the donor and manage the blood to collect the blood as needed. To ensure that no patient dies due to lack of blood

Features

App's functionality and features:

- User Sign In
- User Sign Up
- Donor Profiles
- Donation Requests
- Search Donors
- Available Doner's Location
- Notifications
- Donation Centers
- Social Sharing
- Donation History
- One to One Massage
- Feedback and Ratings
- Privacy and Security
- Multi-Language Support

Technical Requirements

- Outline the technologies, platforms, and tools for app development:
 - Mobile platforms: Android
 - Framework: Flutter
 - Programming languages: Dart
 - Version control: Git
 - Development tools: Android Studio

Architecture and Design

App's architecture:

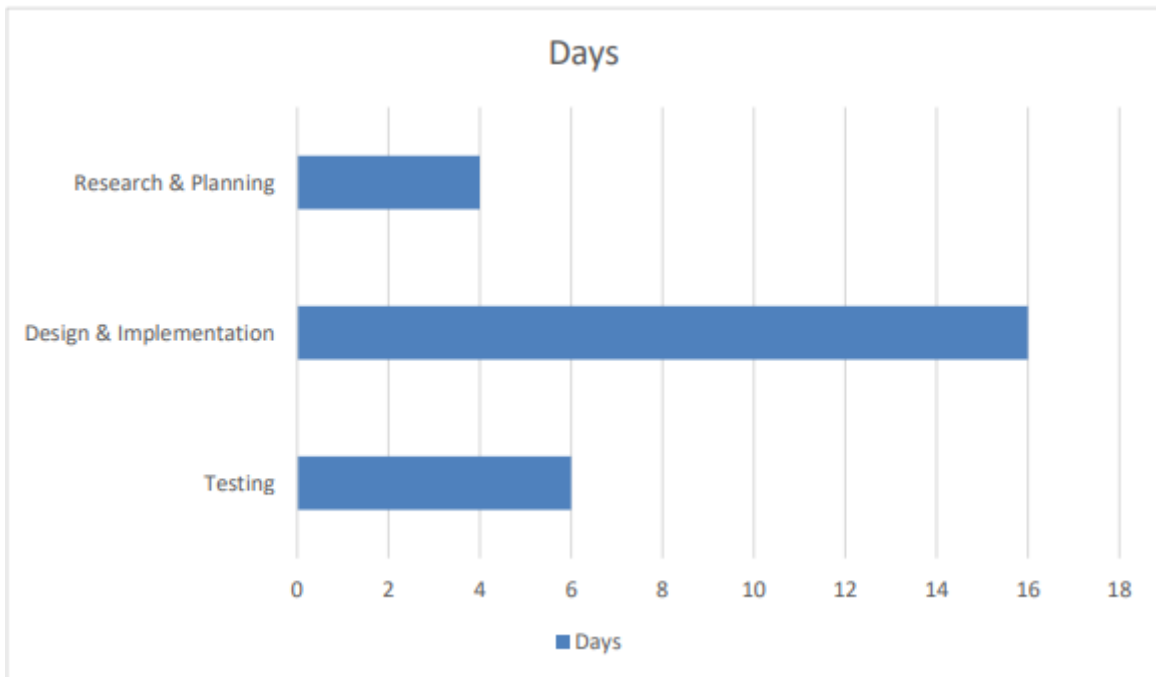
- **Front-End (Flutter):** The front-end is designed using Flutter, a versatile framework for building natively compiled applications. It follows the widget-based structure, allowing for modular design and easy customization. Widgets, such as Material Design components, are used to create a cohesive and user-friendly interface.
- **Back-End (Firebase):** Firebase serves as the back-end for the application, offering features like Firestore for real-time database storage, Firebase Authentication for secure user sign-in, and Firebase Cloud Messaging for instant notifications. Firebase ensures a reliable and scalable infrastructure for data management and user engagement.
- **State Management(GetX):** GetX is a popular open-source Flutter package that simplifies various aspects of developing mobile applications with the Flutter framework. The app employs state management solutions like Getx to efficiently manage and share data across different parts of the application. This approach guarantees that the user interface stays responsive and data remains synchronized

Database Schema

Users Collection:

- **User Profiles:** Document per user with fields for name, email, phone number, blood type, and location.
- **Donation History:** Subcollection within the user's document to store their donation records. Each record can include the date, location, and any additional information.

TimeLine



Development Plan

- Requirement Gathering and analysis
- Design
- Development
- Testing
- Maintenance