Rajshahi University of Engineering & Technology

Department of Computer Science & Engineering

Title: Blood Bank Management Android Application

GitHub:
https://github.com/takitamim/BloodBank_CSE2100/tree/master

Course Code:	CSE 2100
Course Name:	Software Development Project 1
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Submitted By:	Submitted To:
Name: Taki Tamim	Nahin Ul Sadad
Section: A	Assistant Professor
Roll: 2003002	Computer Science and Engineering
Year: 2nd Year, Even Semester	RUET

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Introduction:

"Blood Point" is an android application to collect or donate blood easily. Users who have an android phone & active internet connection can contact and start searching for a donor easily through this application. The purpose of this application is to help people belonging to rural areas.

Features:

Easy contact between blood donor and blood recipient through this android application. Included:

- User Databases
- User Login & Sign up
- Donor Details
- Finding blood group easily
- Finding nearby donors
- Achievements & Rewards
- Direct communication with donor

Tools used:

- Firebase Database
- Firebase Authentication
- Google Maps API
- Android Studio IDE
- Android version 4.0 or later
- Android SDK 17-28

1.   Android Studio: Android Studio is the official Integrated Development
Environment (IDE) for Android app development. It provides a powerful set of tools for designing, coding, testing, and debugging Android applications.

2.   Firebase: Firebase is a comprehensive mobile development platform provided by
Google. Your app heavily relies on Firebase services for various functionalities.

3.   Java: Java is the primary programming language used for Android app development. It's the official language for Android development and is widely supported.

4.   XML: XML is used for defining the layout and UI elements of our app's user interface.

5.   Firebase Authentication: Firebase Authentication is used to handle user authentication securely. It allows users to log in and sign up using their Google accounts.

6.   Firebase Realtime Database: Firebase Realtime Database is used for storing
and syncing app data in real-time. It's a NoSQL database that provides real-time synchronization between clients.

How To Install:

You can install this application to test on your android smartphone. To download the signed application go to your chrome browser and copypaste the download link: https://github.com/takitamim/BloodBank_CSE2100/tree/master

Download will be started automatically. After then install it on your android device. Open the application, create an account. That's it. N.B: It supports only in android version 4.0 or later.

User Interface:

The user interface of the "Find University" app is designed with a primary focus on user experience. Key components of the app's interface include:

•   Splash Screen: An engaging introduction to the app, offering a visually appealing starting point for users.

•   Login Interface: A secure and user-friendly login mechanism, allowing users to create accounts and access their profiles.

•   Blood Donor Search: The Blood Donor Search user interface is a sleek and intuitive platform that effortlessly connects donors with recipients, streamlining the process of finding life-saving blood donations.

•Posting Requests: The Posting Requests user interface simplifies the process of requesting assistance, offering a straightforward and accessible platform for users to share their needs with the community.

•Donors Availability and Location Tracking: The Donor Availability user interface provides a clear and real-time view of blood donor

availability, ensuring timely and efficient matching of donors with recipients in critical situations with detecting current location if needed .
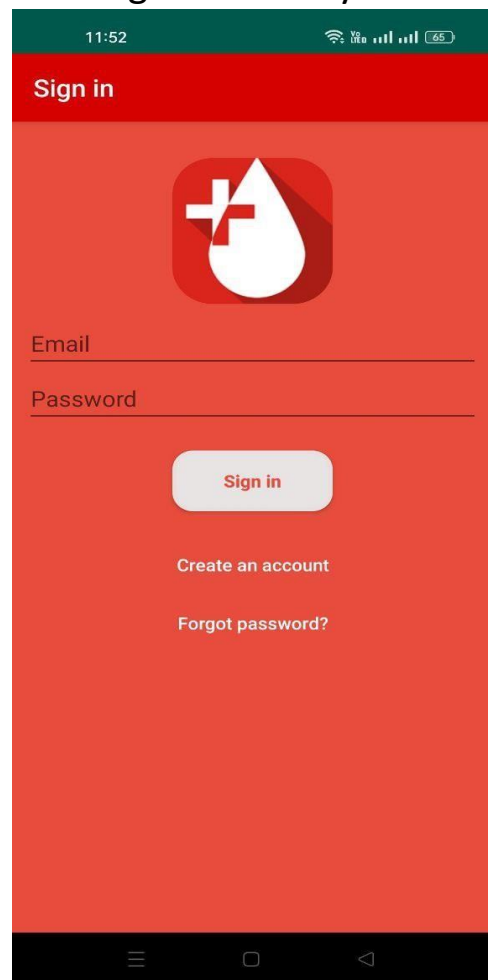
•   User Profile Management: An interactive feature that enables users to view and update their profile information, providing a personalized experience.

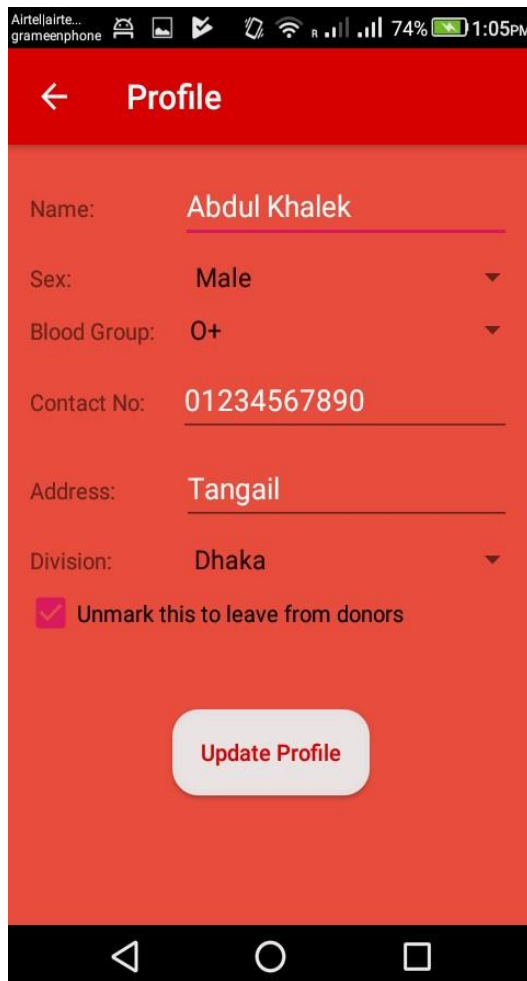# Project Overview:
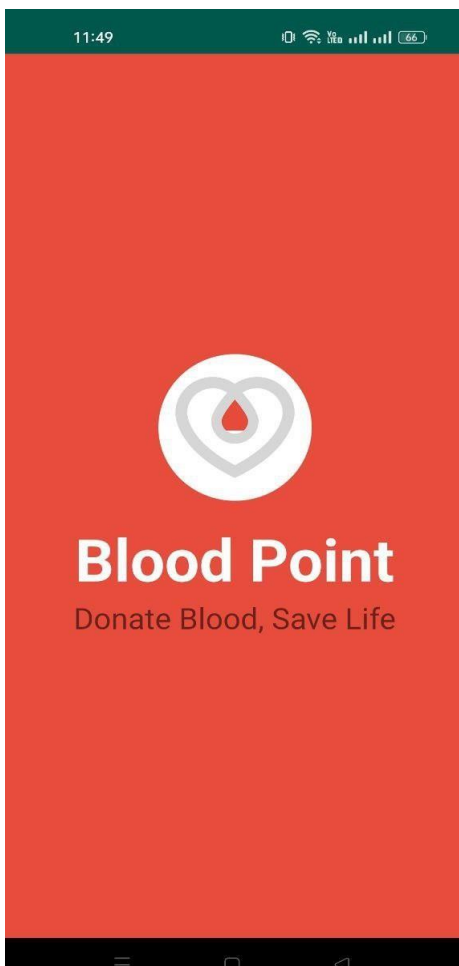
❾ Splash screen: -> Sign-In Activity:

Notice: The 'Sign In' Page provides the user opportunities of Signing In, Creating and Registering for new user account and retrieving account if the user forgets password.
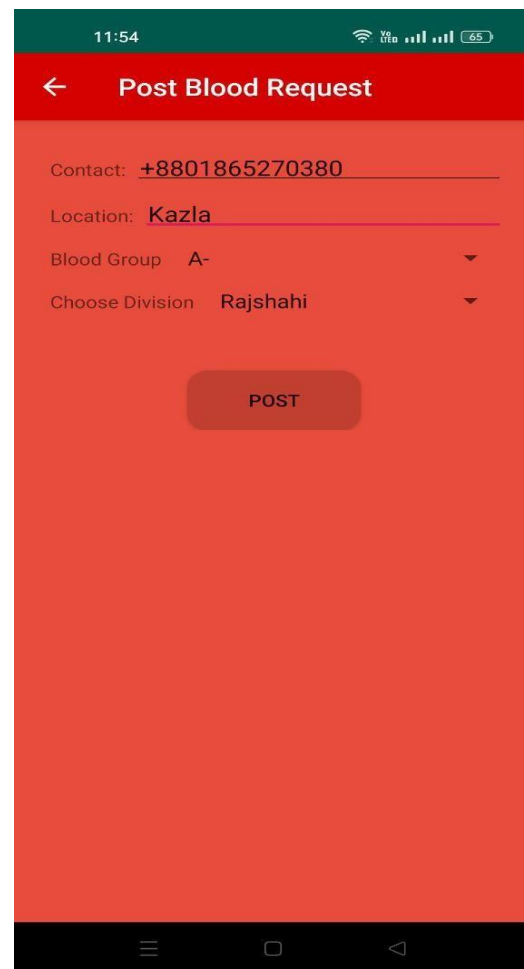
❾ Update Profile: -> Posting for Blood:

Notice: In 'Profile' option, the user can modify his personal information whenever he needs.

'Post Blood Request' option lets other users to know about blood requirements.

❾
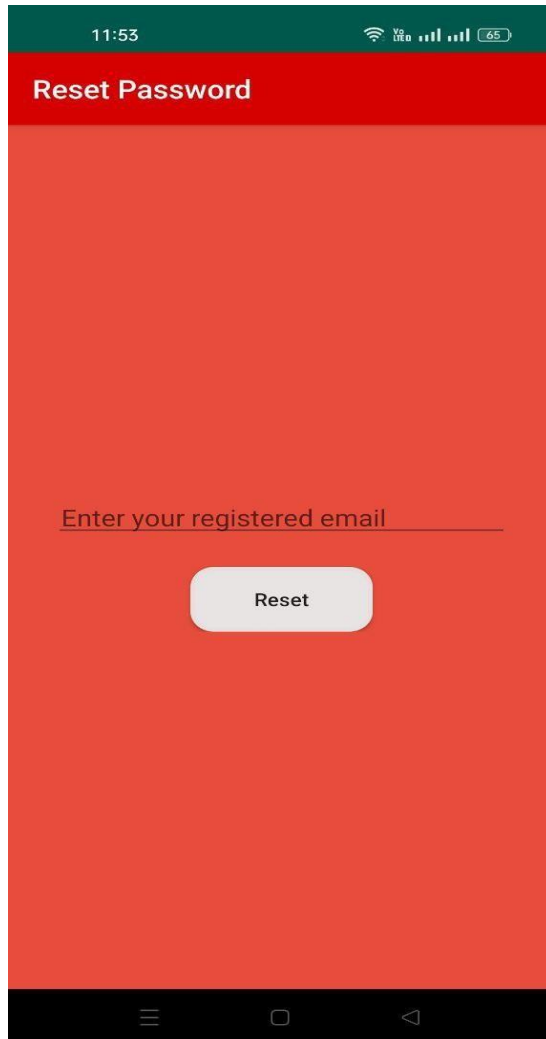
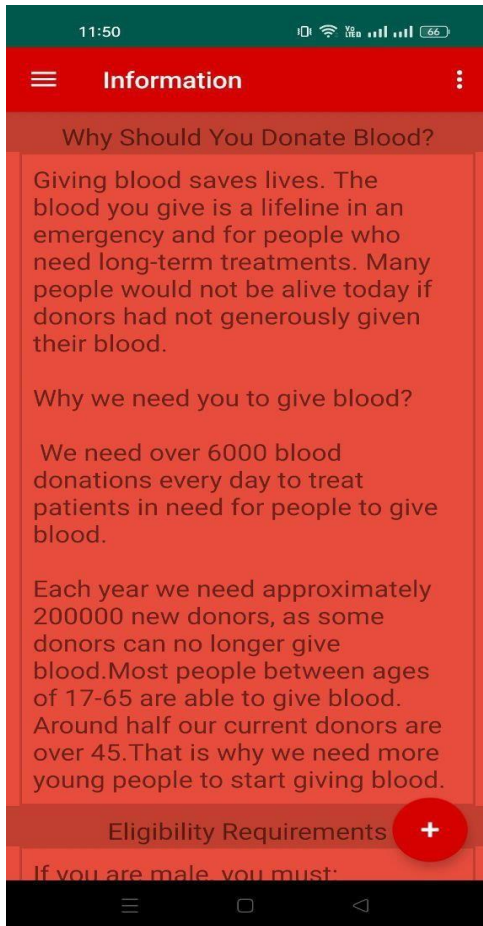Password Recovery: -> Showing All Requests:

Notice: 'Reset Password' option, helps user to retrieve his account
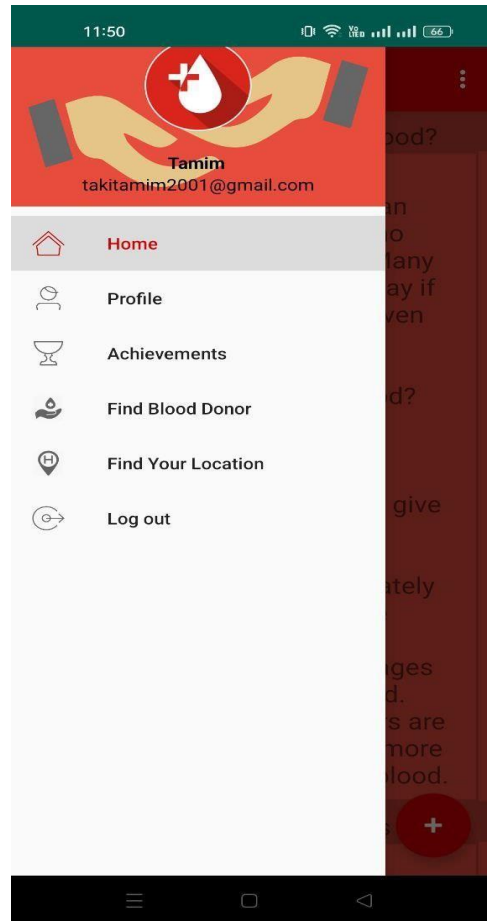if he forgets current password.
'Blood Point' option contains all concurrent posts about blood
requirements.

❾

Motivational Information: -> Drawer Options:
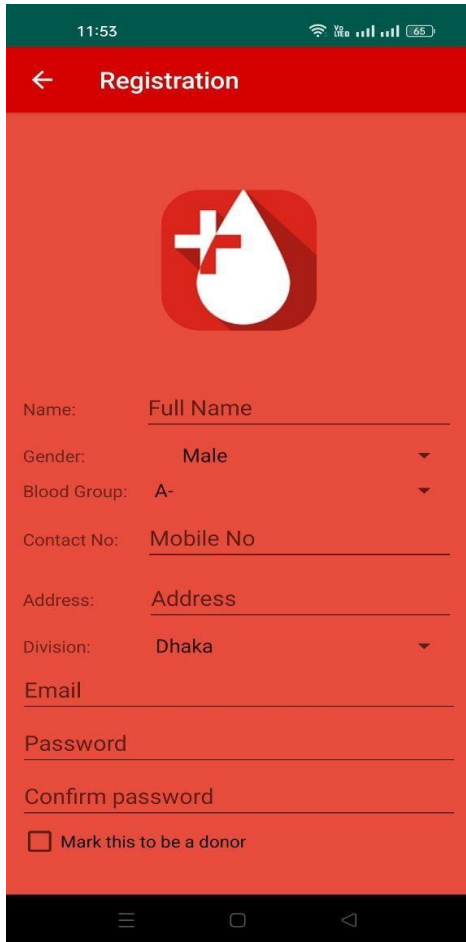
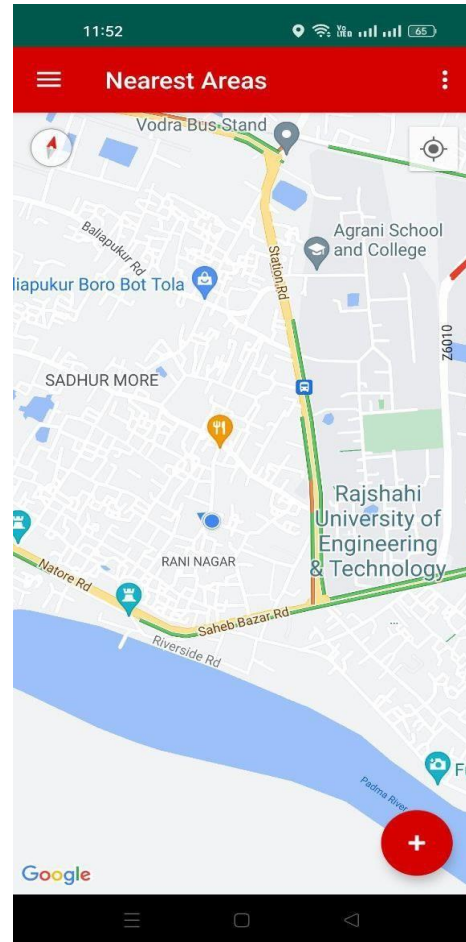**Notice:** 'Information' feature is added to accelerate blood donation tendency. 'Drawer Option' avails us to taste and enjoy different conveniences and making the process easier.
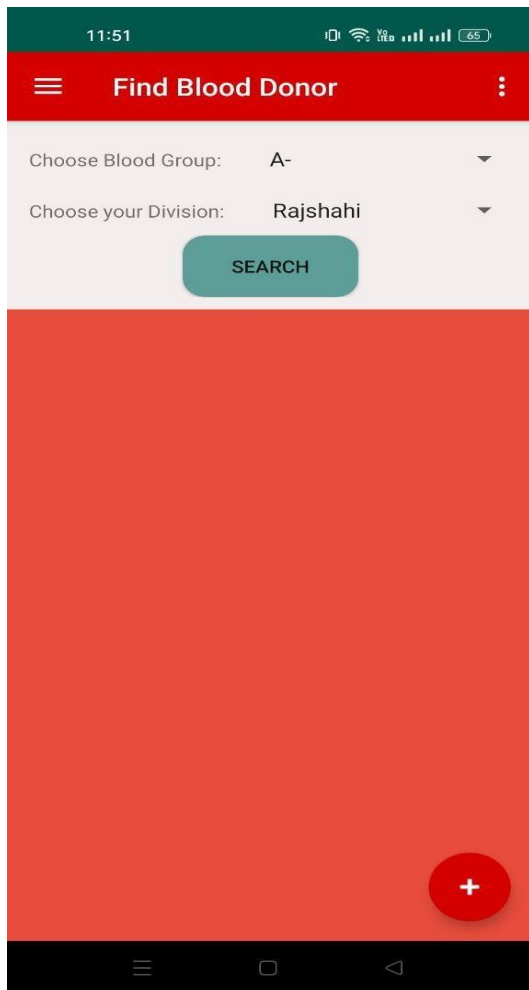
❾

Registration Page: -> Showing Current Location:

Notice: While the 'Location' toggle-button is ON, then the registration page can directly fetch current location's address from Google Map.

❾

Finding Donor: -> Donor Found:

Notice: While any donor is available in nearby areas having required
blood group, Their information will be displayed on the screen. By
clicking on their 'Name', we can visit the individual profile of that donor.

❾
Then, By clicking on 'Contact' option, we are directly redirected to 'Caller' option and avails us to instantly call that donor.

User Achievements:

❾
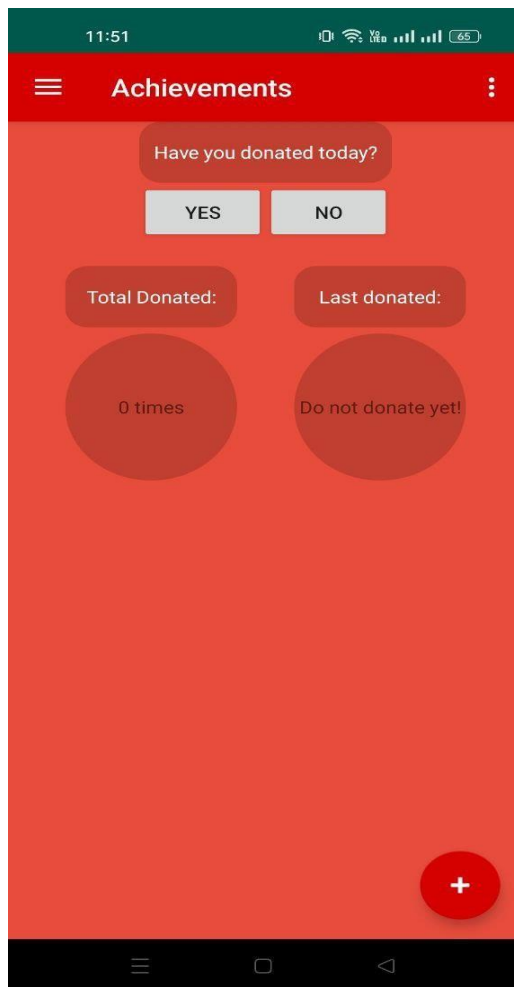
Notice: This feature automatically counts the blood donation duration and determines whether a donor is available right now or not.

Conclusion:

In conclusion, the Blood Bank Management Android app serves as a lifeline, seamlessly connecting donors, recipients, and blood banks. Its user-friendly interface and robust features ensure swift, reliable, and efficient blood donation coordination, ultimately saving lives and fostering a stronger, healthier community.

Acknowledgments: