ENHANCED MOBILE APPLICATION DEVELOPMENT FOR PLASMA, MOTHER'S MILK AND BLOOD BANKS

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Abstract - Covid-19 is currently spreading as a deadly disease and till today no medicine has been found for this disease. Alternatively, now a day's plasma transplant surgery is also being performed rapidly. At this present time plasma banks are in short supply. Not only that, but the number of plasma donors is low too. And some people do not know what plasma donation is and where to donate plasma. We have set up a system to alleviate this situation and help needy people to identify plasma donors and plasma banks.

As the world grows in this modern age, only a few babies are born prematurely without the nutrients they need to grow. Mother's Milk provides the best nutrition for those babies after birth. But babies do not even get Mother's Milk properly. So those children get many more defects and become infected. We found a news on the social media site that a woman donated her Mother's Milk to help and rectify the situation. We have set up a system to encourage that action and help them. Today mobile and mobile primarily based applications became a neighborhood of our day to day life.

The main objective is to develop an Android application to build a network of people (Donors, Recipients and Health care departments) who can help each other. This automaton application is developed to simply explore for plasma, mother's milk and blood in near areas for emergency.

***Key Words*: Plasma/Mother's Milk/Blood (PMB) Donor, Plasma, Mother's milk, Blood, Donor, Android application.**

1. INTRODUCTION

Recent researches show that many people are willing to help someone in need through money, blood and plasma donation, mother's milk donation etc.., but they find it difficult to identify and approach the needy people who are not aware of technological innovations, including the use of social media.

1.1 Literature Review:

G. Kiran Sai1, Kapil Kumar Department of ECE, Lingaya's Vidyapeeth, Faridabad, Haryana (India) has proposed a Database Management of Blood Bank & its Availability to Users through Mobile Terminal. This application timely updates info| the knowledge| the data} concerning the donors wherever the administrator accesses the full information regarding bank management system. Donor are going to be prompted to enter a human's details, like name, telephone number, and blood type. Blood bank App provides list of blood banks in their space. solely a registered person, with disposition to gift blood, are going to be able to access the service. In this application they are using the GPS technology to trace the way to the blood bank. The user will get the route to reach the desired location and therefore time can be saved.

1.2 Existing System:

Mother's milk is nature's perfect baby food. The immunity boosting antibodies are healthy enzymes are some advantages. The invaluable, importance of donating mother's milk has been brought to limelight by the online forum "Amirtham" created by Ms. Roopa, Tamilnadu.

2. Proposed System

Though there are many android applications available for blood donation and blood bank management, they have not included any provision for Plasma donation. The existing system for Mother's milk donation is only based on What's app. These groups are limited to 100 members only. It is very difficult for the coordinator to add or remove users of various groups and manage other resources. Thus, this system suffers scalability and security issues. Hence, we propose an enhanced mobile application for Plasma, Mother's milk and Blood banks to administrate their users and resources easily and enhance security for information stored on the databases.

2.1 Objective

➢ To provide a common platform for Plasma, Mother's milk and Blood Donors, Recipients and Health care system.

➢ To track the location of Donors using Maps and Send quick messages via short message service.

➢ To advertise and effectively manage Blood/Plasma/Mother's milk camps.

➢ To provide scalability and ensure security.

➢ To provide health tips and guidelines about PMB donation.

2.2 Block Diagram

Block diagram for the planned system is shown in Fig 1. If the user wishes to donate plasma/Mother's milk or Blood, they must register as a donor in this application. This application will enable recipients to find suitable donors and communicate directly with plasma, mother's milk and blood banks. Users can call banks or donors or visit them directly for any assistance in arranging appropriate plasma or mother's milk or blood.
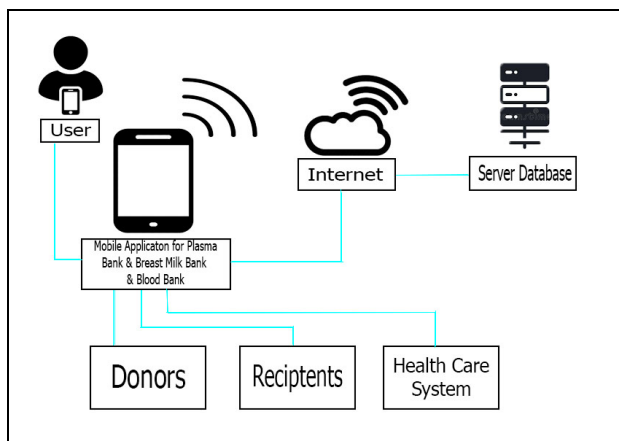

Fig -1: Block Diagram

2.3 Advantages

➢ Simple User Interface

➢ It alleviates the burden of coordinator to manage Users and resources easily.

➢ Compared to all other mobile applications, it incorporates provisions for Plasma and mother's milk donation.

➢ Attracts more, number of users as it is available in the form of Mobile application instead of What's app group.

➢ Usage of this application will greatly reduce time in selecting the right donor.

3. MODULE DESCRIPTION

The planned system consists of the subsequent modules:

• Admin Module

• PMB Bank Module

• Donor Module

• Recipient Module

3.1 Admin Module

The person who manages the application as a whole is the administrator. The administrator login must be able to manage PMB banks, Donors, Recipient's request, query PMB banks about Inventory and view feedback. The data flow diagram of proposed system is shown in Fig.2.

3.2 PMB Bank Module

This Mobile application, will being the donors on a common platform. It is a matter of honour and our pride to all those babies who are in need of mother's milk and her services are to be called to reach the common folks in need which is a boon and a blessing. PMB bank login can perform the following tasks on the mobile application. They can view Recipients' s request, Manage Donors, add new PMD banks, provide status of storage, etc.

3.3 Donor Module

The donor can get registered using this mobile application. They can login and create their profiles. They can contact PMB banks and get appointments. They can also view the tips and advertisements about PMB donation camps.

3.4 Recipient module

The recipient login can access the list of donors from the database according to the needs and find suitable donors very easily. Recipients can also create profiles and check the availability of PMD, place a request, etc.
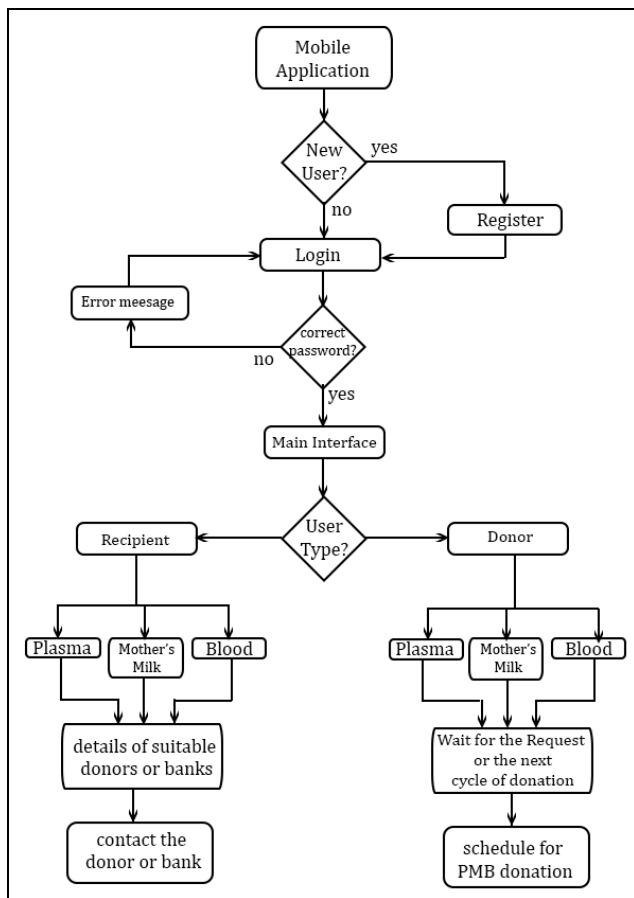
• Data Flow Diagram (Donor & Recipient)

Fig -2: Data Flow Diagram

4. SYSTEM IMPLEMENTATION

This project is based on Android OS version 6.0+ developed in Android Studio, which enables developers to create high quality applications for Android devices. It provides custom designed tools for Android application developers, including rich code editing, debugging, testing and specification tools. Plasma, Mother's Milk and Blood Bank is an Android application that uses the Firebase & 000webhost.blogs (web cloud) real-time database to quickly and efficiently search, collect and sort data for each Plasma, mother's milk and blood donor and users. (A google-services. Json) must be registered for the Android application using the Firefox console).

5. RESULT

The results are represented with the capabilities of different logins in the mobile Application. It tells the systematic process of each user login capabilities in a systematic way
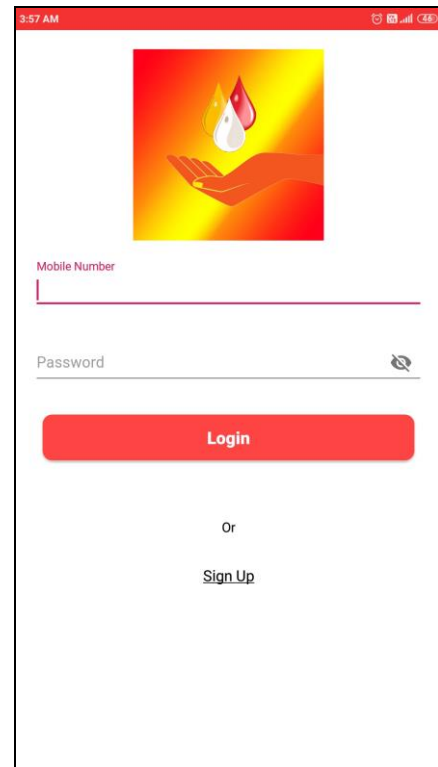
5.1 Login:
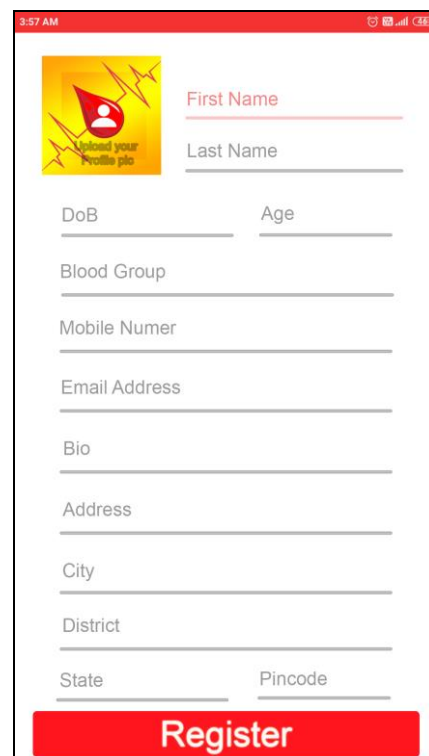

Fig -3: Login page

5.2 Registration:

Fig -4: Register page

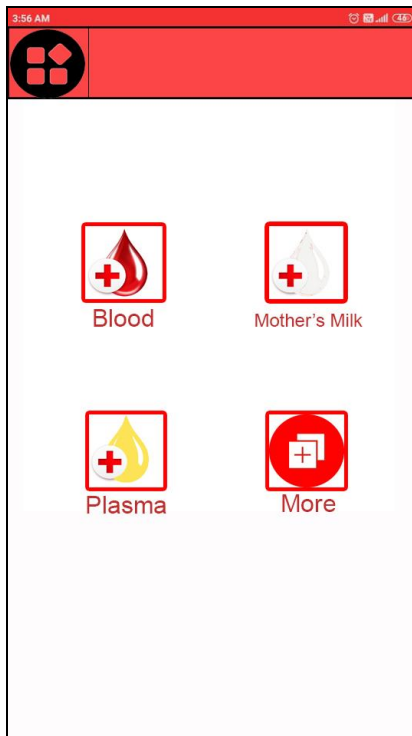### 5.3 Main menu:

Fig -5: Main page
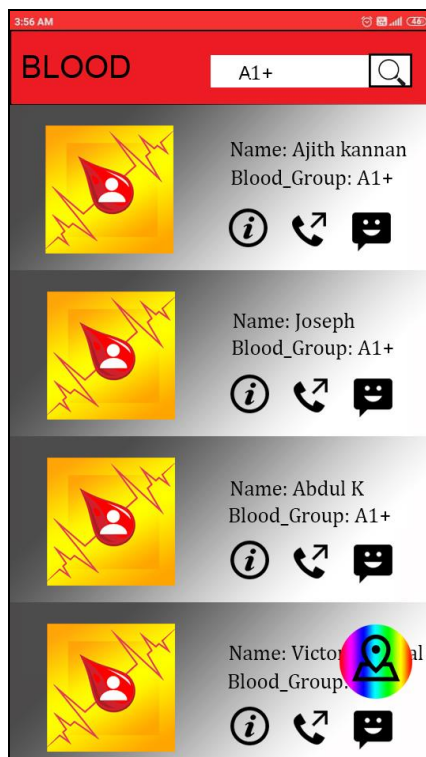
5.4 List of Donors:
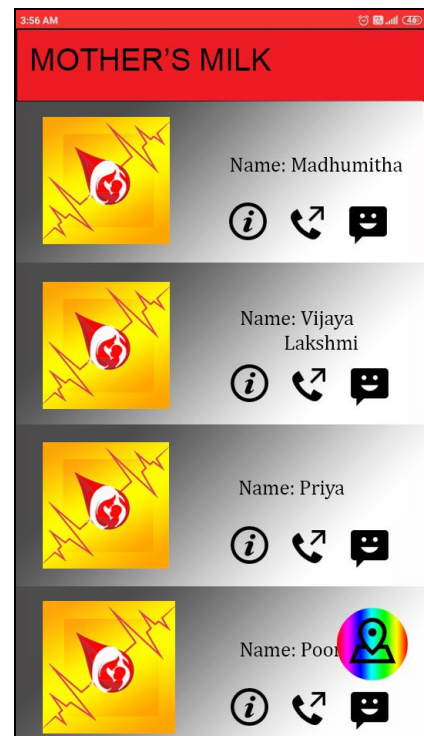

Fig -6: List of Blood donors page

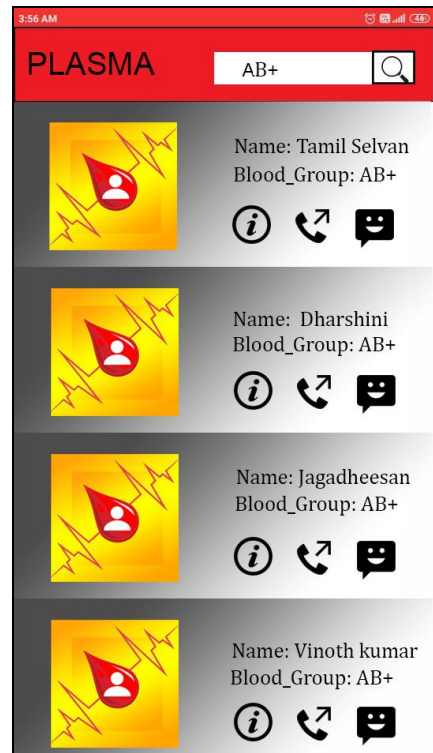**Fig -7:** List of Mother's milk donors page

Fig -8: List of Plasma donors page
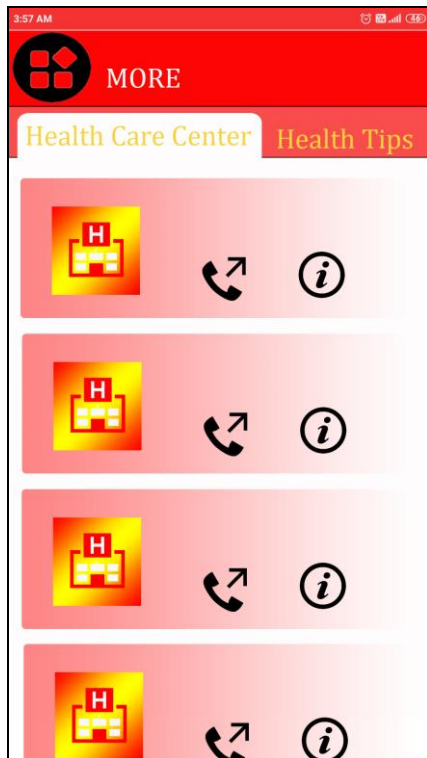
5.5 More option page:

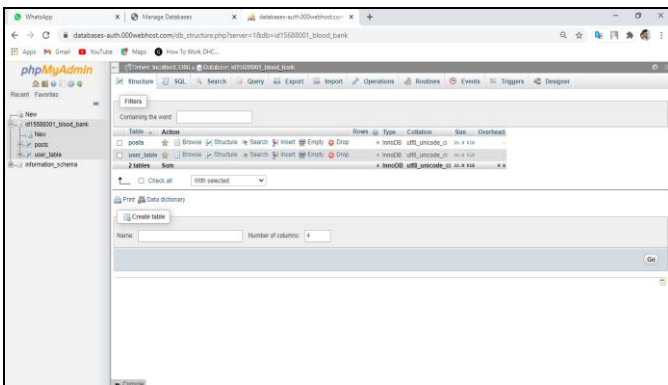**Fig -9:** More Option Page

5.6 Back end

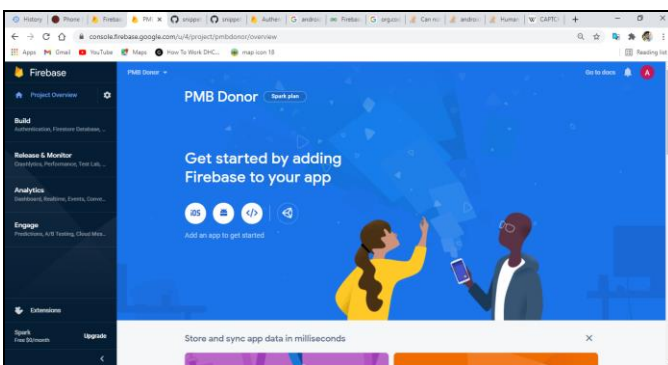**Fig -10:** 000webhost.blos Data base

Fig -11: Firebase Data base

6. CONCLUSIONS

Enhanced mobile application for plasma, Mother's milk and Blood has been developed to help the administrator to attract more donors and recipients and make user management an easy task. This mobile application will attract more users as it is user friendly and greatly reduces scalability issues especially in the case of Mother's milk donation. Not everyone in the world can donate Mother's milk. Only Feeding moms can donate mother's milk. Thus, we have successfully designed and developed the Android mobile application to ease the process of becoming a donor and recipient of PMB bank.

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