

BLOOD BANK AUTOMATION USING ANDROID APPLICATION

Prof.Y.R.Risodkar¹, KhushabuShirsath², SnehaWagh³, KunalSali⁴

¹AssistantProfessor, DepartmentofElectronicsandTelecommunication, SITRC, Nashik

^{2,3,4}Student, DepartmentofElectronicsandTelecommunication, SITRC, Nashik

Email:¹yogesh.risodkar@sitrc.org,²khushabuss021@gmail.com,

³snehasanjaywagh@gmail.com,⁴kunalsali09@gmail.com

Abstract—Blood is one of the most critical element and its truly referred to as river of life. There are number of emergency situation where urgent blood is required. In this paper, we proposed a technique of Blood Bank Automation using Android application in which blood inventory will be managed and automated on line. In this application the administrator accesses the whole information about blood bank management system related to donor. You can quickly check for blood banks or hospitals in the emergency situation you can find the matching of particular or related blood group and reach to the particular location through the App. Through this app we can get the list of blood banks in nearby area.

I. INTRODUCTION

Every year our nation requires about 5.1 Crore units of blood, out of which only a meager 2.5 Crore units of blood are available. More than 38,100 blood donations are needed every day. A total of 31 million blood components are transfused each year. More than 1.1 million new people are diagnosed with cancer each year and they need blood, sometimes daily, during their chemotherapy treatment. A single car accident victim can require as many as 101 units of blood the average red blood cell transfusion is approximately 3 pints. This project is aimed to develop on line blood donation information along with automation of blood bank by using android application and website.

A. Main Objectives

- 1) To provides an efficient donor and blood stock management functions to the blood bank by providing the login function in order to control and trace the workflow.
- 2) To provide validate and authorized feature to the current system where private and confidential data can only be viewed by authorized user.
- 3) To provide the recording functions for every process of the blood in order to keep trace of the blood stock accurately.

II. LITRATURE SURVEY

Automated Blood Bank Management System Using Direct Call Routing Technique brings voluntary blood donors and those in need of blood on to a common platform. This project servicing the persons who seek donors who are willing to donate blood. Direct contact between the donor and recipients the main concept of this project. Direct call routing is the technique used for providing the communication between the donor and the recipient. From the server call from required person is routed to the eligible donors number [1].

”An android application for Volunteer blood donors.”In an emergency situation, if the stocks are below the required level then only source for blood supply will be the people who donate the blood in health center on a voluntary basis. At that situation the health care center should call the nearest available donor in order to get the service as quickly as possible. A smart phone application is developed to facilitate the identification of the nearest available blood donor volunteer. It provides an uninterrupted communication between the health care centers and volunteer donors so that in the emergency situations where the blood cant be supplied through the blood banks stocks [2]. Raspberry-Pi Based Embedded Blood Donating Application provides the common platform for voluntary blood donors with the help of educational institutes. Educational institutions supporting the students blood force collecting all the data of the voluntary blood donors and passing according to the message request the mission of this project is to fulfill every blood request in a short span of time via SMS or with a promising web portal. The proposed work explores to find blood donors by using GSM based Smart Card CPU Raspberry Pi B+ Kit [3].

”The Optimization of Blood Donor Information and Management System by Technopedia” The proposed method is to create a website with an android application is developed so that the blood donors are available easily within the required time. The donors who are nearby location are tracked by the android application by GIS[4].

III. PROPOSED SYSTEM

One has to download the application. After downloading the application one has to register as a donor if want donate the blood. For registration some basic details like Name, address, contact, date of birth, blood group, email id etc are needed.

If already register, then he/she has to login. The user can also request for required blood by giving any small description. This request is submitted to admin who accepts or rejects the request. Accepted request is published by admin. By using GPS, victim can searches nearby hospitals and blood banks. The proposed system consists of mainly five modules-Admin, Donor, Acceptor, System database, App.

A. Admin:

Admin is the person who monitors the information related to donor and acceptor. Administrator can change password, Maintain donor details. Maintain acceptor details, Update donor details, etc.

B. Donor:

Each new Donor has to register himself. For unique identification of the donor user id and password are provided after registration. Ach Donor has to fill all the basic details like name, date of birth, address, gender.

C. Acceptor:

Acceptor is the person who needs blood for someone related with him. He can make the request for the blood through application and website according to their blood group and requirement

D. System Database:

It stores all necessary and important information related to donor, acceptor and patient. There will be an option for updating the information related to users which helps in tracking and managing information.

E. Blood Donation App:

An android application created for making request for blood by checking the availability of the blood in different blood banks and for donating blood. It is also used for searching the nearby banks and hospital.

V. RESULTS

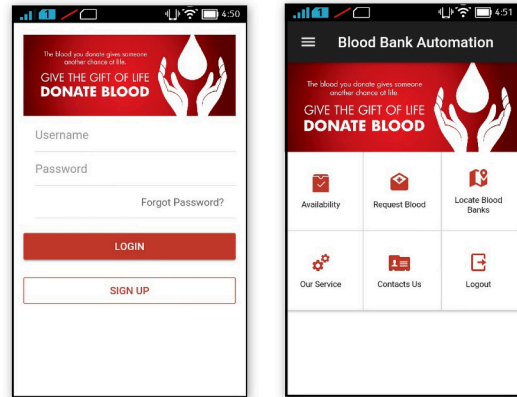


Fig. 1. Home Page & Login Page

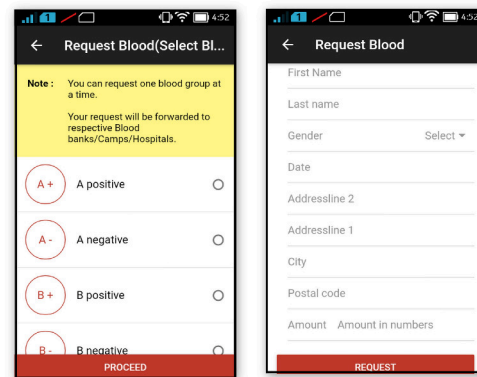


Fig. 2. Request Blood

IV. METHODOLOGIES

- Cordova
formerly called as Phone Gap is a platform to build Native Mobile Applications using HTML5, CSS and Java Script.
- Ionic 2
Ionic 2 is the next generation of Ionic, the open source SDK that enables developers to build performant, high-quality mobile apps using familiar web technologies.
- Angular 2
AngularJS is a JavaScript-based open source front-end web application framework.

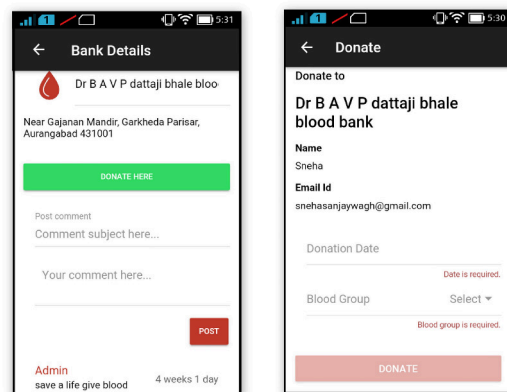


Fig. 3. Donate Blood

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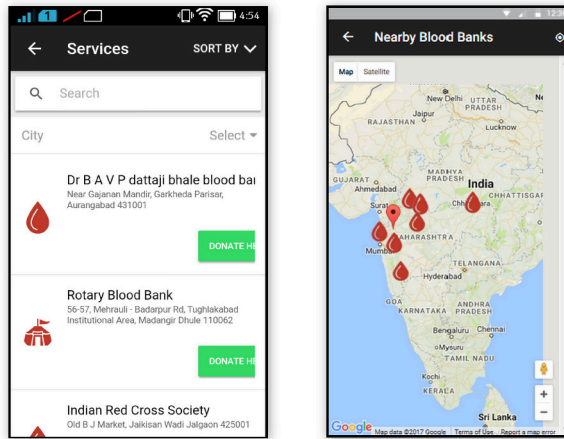


Fig. 4. Nearest Blood Banks

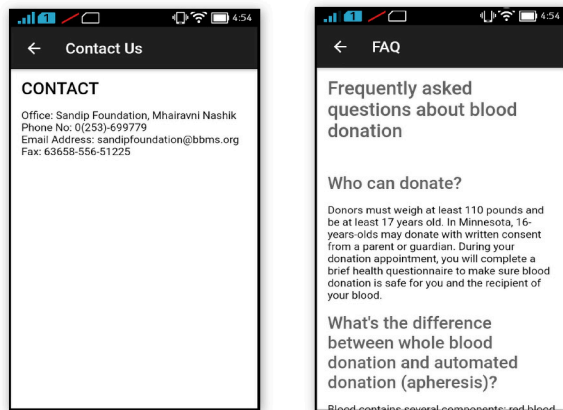


Fig. 5. Contact and FAQ's

VI. CONCLUSION

We have proposed an efficient and reliable android application for blood bank. When there is urgent need for blood, it may not be possible for people to communicate with the each and every hospital and blood bank. For that the application can fulfill their requirements in short time span so that it can overcome the death rate. Thus the proposed system can help everyone who is need of blood anytime and anywhere.

This system not only used for the blood bank automation system but also used for organ donation system. This system is very helpful for the smart city and smart nation purpose.

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