Computerized Blood Bank Management System Using Geofencing

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Abstract

Blood is the main constituent of our body there are many problems where the availability of blood is very much important.and therefore we have created an application for donors. Donors are going to be prompted to enter the details like name telephone number and blood type.In emergency situations you can check for blood banks or hospitals matching specific blood type with the help of geofencing and filtering techniques.if blood is not there then user can look for donor's that are nearby there houses.an out-sized number of blood donors are attract using Android Application.Since every person has mobile phones with him only the person has to do the registration on the application and he/she will be able to get the services .with the help of GPS technology we can track the blood bank and the requirement of the blood .The person can trace and reach the desired location.if the blood is not there the application can make the range greater to acquire the blood.

Keywords*: geofencing, filtering techniques, Donor, Receiver*

I.   INTRODUCTION

 In today's world technology has become a very important aspect of life.Today's world is more dependent on technology or automation. And most of them use advance technologies in their daily life like Internet, Mobile phone. So, the idea that is mentioned in this paper will make the entire process in less time by collecting all information of donor and receiver. In these application there will be various pages for donor, Receiver, and blood bank and hospitals. Donor and receiver has to register themself to use the Application. For Receiver, no requirement to check in every blood bank the need of the blood so when needed it can be reached immediately by nearest blood bank.During the emergency situation there will be notification that is given to the donor to donate the blood. The Blood Donation application mostly depends on android application. The main role of admin which acts as server to compare donors and patient group by using knowledge base. Blood bank System application should have patient/receiver and donor information that should match the blood requirement . Donor should first register in the system for his validity whether he/she is correct person or not. Blood details and blood bank details also add by system so their data and blood availability also available for users. In the registration page the user has to first fill the details and there is also a login page .That is provided for users,patients,donors, and blood bank systems. After adding all data by donors and blood banks the data is available for users to further uses. Google map is integrate in android application so user find the donors using geofencing technique. User input data as blood group and distance to find nearby donor. And all the donor data such as blood group, hemoglobin, age, health status is available for users. User can directly contact with donor through android application.

II.   LITERATURE SURVEY

1. T.Hilda,R.Backiyal [1], made a cloud based blood donation app and we get to know about this from their paper "Transportation of blood products and their storage". the blood that is collected from

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regional blood centers is stored and transported when required .And vehicle is provided for collection of blood so it is easy in the collection of blood.

2. T.Shekh and D.Shilpa [2] – the authors of "Android Blood Donor Life Saving Application in Cloud Computing", it is a web application in this application the visitors can send a notification to the donors but a registered person can call as well as mail and appointment get confirmed to call the donor .the system will alert the donor before 24 hours.

3. S.Goobie,G.Maji[3]In this application a network of people has built that during emergency situations right donor is available at the right time.application updates the information of donor the person who has registered and has match the blood group can donate the blood. And the application includes multi-modal strategies to screen, diagnose and properly treat the diseases. application is proposed to find the hemoglobin concentration in the body[10].

4. the LBS system, the Google map in Android, it can handle the various number of objects in the maps in LBS system like Map View which displays and handles the map. To handle this, a Map Activity class is used.it uses canvas by which one can easily display multiple layers.it includes the accurate location of donors, the purpose of application is to help rural people[11 12].

III.   PROPOSE SYSTEM

The system provides easier way for the ones who are in need of blood or there are emergency situations. The user may be donor or the receiver he/she should register with the system first.user can login in the page for the urgent need of the blood. The donor can get notification regarding the blood camps that are held in the cities and can donate the blood when required. The receiver is notified about the nearest blood donor or blood bank to the location of the registered user. The blood banks and the donor are been stored in the mysql database.the user can select the need of blood option and with the help of the user's current location will be tracked using Google Location And with the help of current location he can map the location where the blood is available also the user has to provide which blood group he is.the location of donor will be his current location and it will be retrieved using Google API. And with this the current location of the user will be its actual location and if the user can not get the blood the range will be increased so the receiver can get the blood easily from nearest blood bank servers or ATM.

IV. SYSTEM ARCHITECTURE

the proposed system is mainly used for the urgent need of the blood in emergency situation.there are four components admin,user, donor and receiver.firstly whenever there is new user he has to registered in the registration page after that it goes to an admin for validation and acknowledges whether it is a valid user or not and stores the data in the database. whenever donor request for the blood admin checks for the availability of the blood whether it is near to the donor or blood bank .the blood bank request for admin that there is availability of the blood and the receiver can collect the blood .if the blood is unavailable then the application increases its load and find the nearest donor.

System Architecture
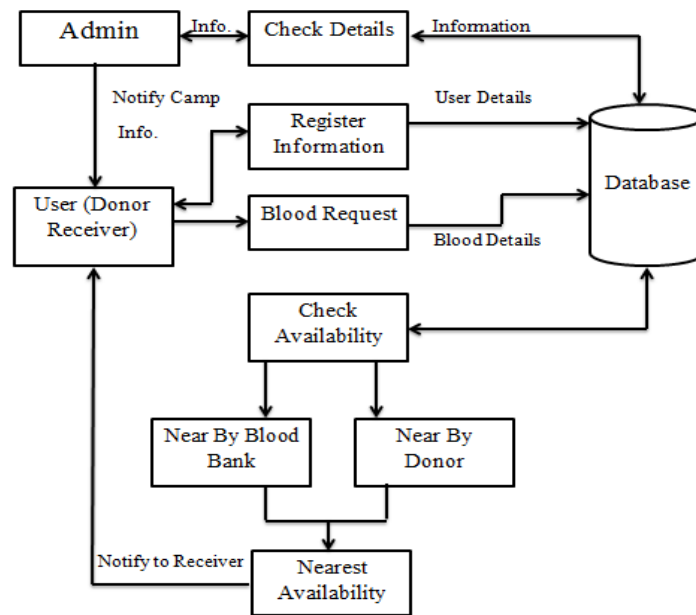
Mathematical Model

F= { F1, F2, F3,F4,F5,F6}

• F1 = Log in Donor Section

• F2 = Find Donate Nearest Camp Location

• F3 = Registration Donation camp

• F4 = Donate Blood

• F5 = Retrieve Blood Donate Certificate

• F6 = Upload certificate OR Logout

R= { R1,R2,R3,R4,R5}

• R1 = Log in Recipient Section

• R2 = Search Required Blood group

• R3 = Nearest Blood bank available or not of searched blood group

• R4 = Track available blood group of blood bank

• R5 = Registration required blood group of available blood bank

• R6 = Visit blood bank and retrieve blood
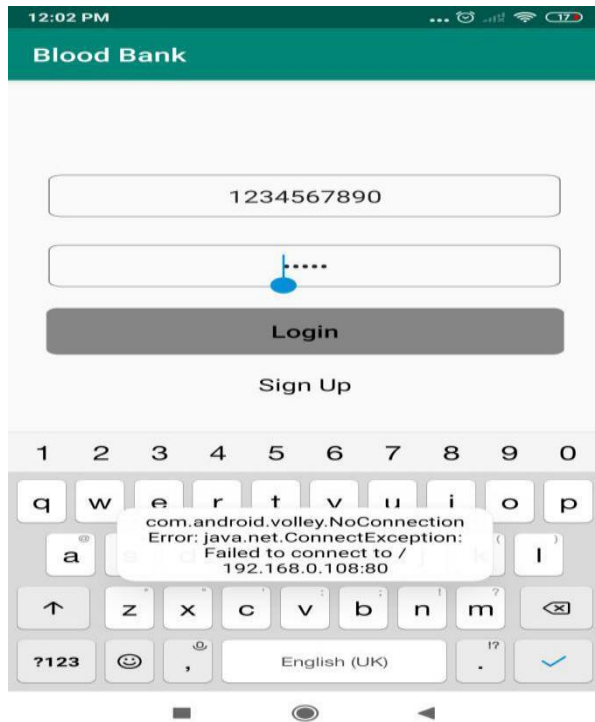
• R7 = Logout

C= { C1, C2, C3,C4,C5}

• C1 = Login camp information

• C2 = Find all Camp Information

• C3 = Click on Nearest Camp Information

• C4 = Provide offline Notification all application user

• C5 = Logout

B= {C , F , R }

B= Overall Login section is Successfully

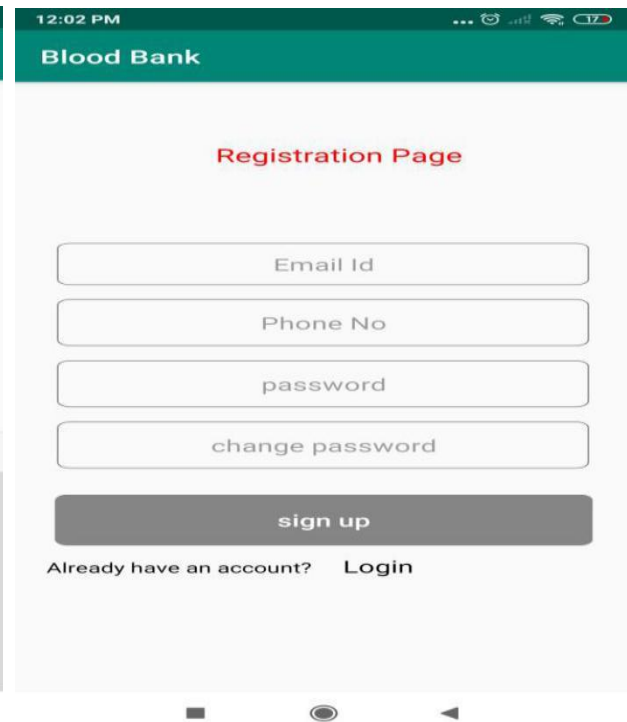**Result**

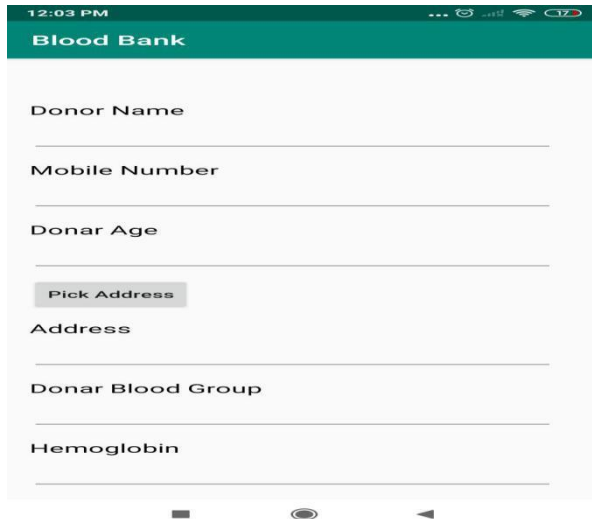Login page: Registration page:
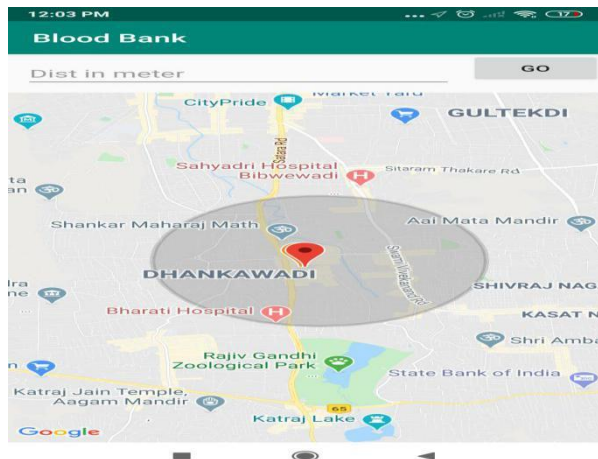

Add Blood Bank: Geofencing:

V.   CONCLUSION

The goal was to achieve the system which will reduce the time required for collection of donor information.

Our proposed system provides easier way for the one who are in need of blood. Proposed system focused on provide the blood as immediately as possible by checking the nearest blood bank and nearest

donor. Also the donor donate the blood when such donor need the blood the discount is given to such donor. The blood from the nearest blood bank is given to the donor.

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