International Journal of Innovative Research in Engineering
Volume 3, Issue 6 (November-December 2022), PP: 65-67.
www.theijire.com
ISSN No: 2582-8746

Blood Donor Locator App

Prathyankara devi V[1], Ch Chandra Sreeja[2]
[1,2] Department of Computer Science and Engineering, SRM Institute of Science and Technology,TN, India.

How to cite this paper: Pratyankaradevi V[1], Ch Chandra Sreeja[2], "Blood Donor Locator App", IJIRE-V3I06-65-67.

Abstract *- Blood transfusion saves lives. But many patients requiring blood transfusion in emergency situations do not have timely access to blood which might end up risking their lives. The purpose of this project is to develop an app capable of finding nearest blood donors during emergencies. It also provides a platform to connect Local Blood donors to patients. During medical emergencies there might be a sudden need of blood in large quantities which might not be available in blood banks. During times like this our blood donor app will be of great use in finding matching donors nearby. Hospitals can raise emergency requests. once a request is raised nearby donors are notified of the need. Here we use a Google Distance matrix which finds distance between to pin codes to identify the nearest donor. They might accept or reject the request. Apart from this individual user can also raise request when there is an emergency need. All these requests are legitimate as all users that is The Hospitals, donors and individual requesters are all registered and are verified. As the app is used primarily during emergencies it has the ability to save a number of lives.*

I. INTRODUCTION

The purpose of this project is to develop an app capable of finding blood donors during emergencies. It also provides a platform to connect Local Blood donors to patients. During medical emergencies there might be a sudden need of blood in large quantities which might not be available in blood banks. During times like this our blood donor app will be of great use in finding matching donors nearby. Hospitals can raise emergency requests. once a request is raised nearby donors are notified of the need. They might accept or reject the request. Apart from this individual user can also raise request when there is an emergency need. All these requests are legitimate as all users that is The Hospitals, donors and individual requesters are all registered and are verified. As the app is used primarily during emergencies it has the ability to save a number of lives.

II.PROBLEM STATEMENT

Understanding the problem efficiently is the key to finding better solutions. Let's look at the existing problems:

A) Manually finding donors during emergency situations is a tedious job and mostly unsuccessful
B) There is insufficient synchron is ation between the hospitals and blood donors.
C) Finding donors who are in a distant place might delay the blood transfusion and hence increases the risk factor.

Hence it is important to come up with a blood donor locator app which eliminates these problems. This app acts as a bridge betweenthe blood seekers and blood donors, eliminates the complexity involved in finding blood donors manually and also helps find nearest matching donor which eventually reduces the risk factor.

III.AIM

Aim of the project is to create a Blood donor locator app which enables hospitals to raise blood request in times of emergencies. post which an alert is sent to nearby matching donors enabling them to donate blood.

IV.PROJECT DOMAIN

The domain of the project is application development. Application development can be defined as the process of creating a computerprogram or a set of programs to perform a specific task for business or public requirement. Here different technologies and areas of application development are used to build this blood donor locating app which is of great help for general public.

V. SCOPE OF THE PROJECT

This app can be of use in hospitals, regular donors and individual users during emergencies.

A) make it easy for hospitals to find locally available blood donors in emergency situations
B) make the good willed blood donors be aware of emergency blood need in their area.
C)

VI. METHODOLOGY

This application has two different viewpoints. One is that of the hospital and another is of the users which includes donors and individual blood seekers. The hospital registers itself in the app using basic details like hospital name, branch, address, pin code etc. necessary information is also collected from the donors while registering like Name, Age, Address, Pin code, Blood type and other basic health details. All these details are then verified and if the donor pass all the necessary requirements, he is given the status of registered and approved donor. Individual blood seekers are also

required to fill up some basic details to ensure the credibility of their request. When there is an emergency blood requirement in a hospital, the hospital raises an emergency blood request in the app upon which registered, approved and matched donors within a 5km radius are alerted. A donor can either accept or decline the request based on their interest. If a suitable donor accepts the request, based on the requirement request can be closed. If a suitable donor is not found within 5 km radius nearest donors are alerted. When an individual raises a blood request, their contacts are alerted through SMS messages. Along with-it nearby blood donors are also alerted to find blood quickly. This is the basic methodology of this blood donor locating app.

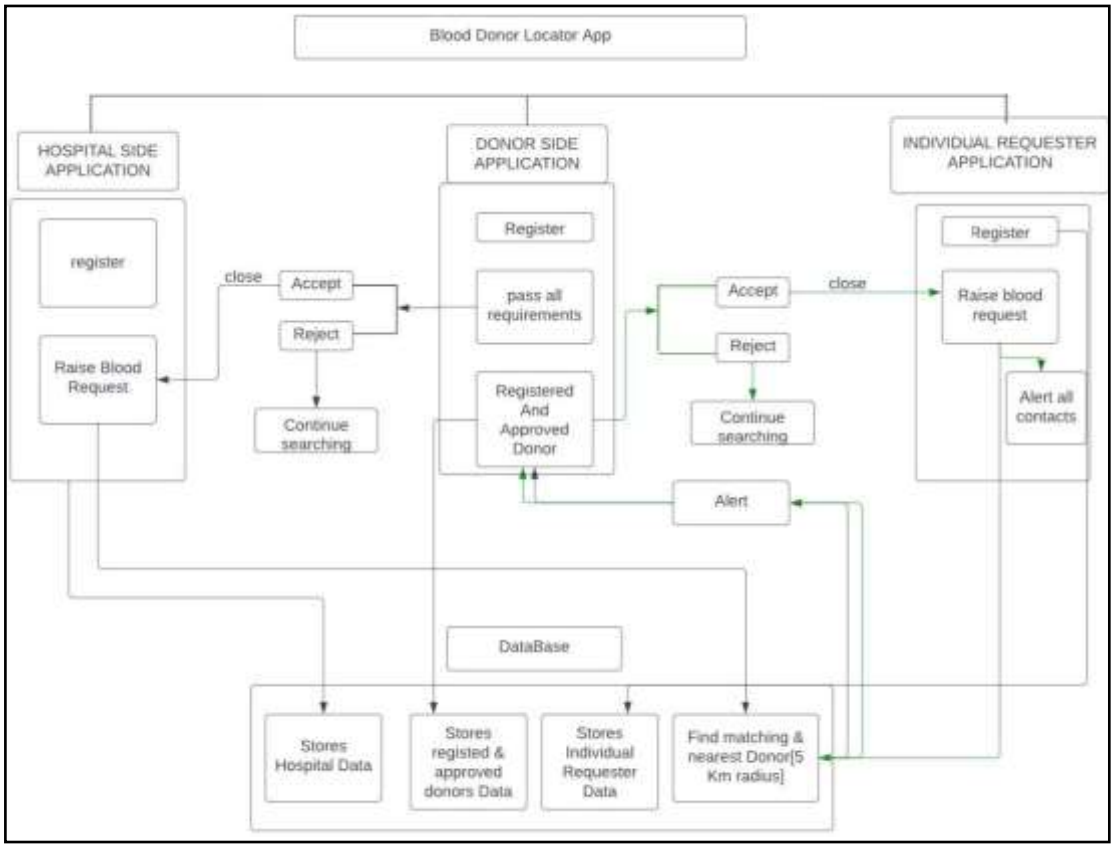

Image: Architecture Diagram

VII.EXISTING SYSTEM

Currently existing apps mostly act as a bridge between hospitals and blood banks. They have also automated the services of a bloodbank. They fail to provide a direct connection between hospitals and blood donors. Connecting hospitals with blood donor is very crucial at times of emergencies. Another key point which they miss is identifying donors in an around the area where emergency blood request is raised. Finding nearby donors can fasten the process of blood transfusion in turn saving lives. Some existing systems are very confusing as involves lot of parties inside the app like blood banks, hospitals, NGOs, donation camp registration, having facilities for donation of other items along with blood donations. Even Though there are some systems which have facilities to find nearest donors they use GPS technologies which might slow down the app functionality. Hence the existing systems are complex and are not fit when there is an emergency blood need.

VIII.PROPOSED SYSTEM

Our Proposed System has two different viewpoints. One is that of the hospital and another is of the users which includes donors and individual blood seekers. The hospital registers itself in the app using basic details like hospital name, branch, address, pin code etc. necessary information is also collected from the donors while registering like Name, Age, Address, Pin code, Blood type and other basic health details. All these details are then verified and if the donor pass all the necessary requirements, he is given the status of registered and approved donor. Individual blood seekers are also required to fill up some basic details to ensure the credibility of their request. When there is an emergency blood requirement in a hospital, the hospital raises an emergency blood request in the app upon which registered, approved and matched donors within a 5km radius are alerted. A donor can either accept or decline the request based on their interest. If a suitable donor accepts the request, based on the requirement request can be closed. If a suitable donor is not found within 5 km radius nearest donors are alerted. When an individual raises a blood request, their contacts are alerted through SMS messages. Along with-it nearby blood donors are also alerted to find blood quickly. Here we use a Google Distance matrix which finds distance between to pin codes to identify the nearest donor. Hence the functionality of the app is also notaffected.

IX.MODULE DESCRIPTION

It provides detailed information about the module and its supported components, which is accessible in different manner.Now in our project we have four modules:

- Registration module
- Raise Request module
- Database module
- Alerting module

Registration module :

- This module is used for registering/singing up into the application.
- There are namely two registration modules –
  1. Hospital Registration Module
  2. Donor Registration Module
- Hospital Registration Module - Hospitals can register into the application via this module.
- Donor Registration Module - Individuals who are interested in donating blood can register via this module.

Raise Request Module :

• Hospitals and individuals who have registered to the application can raise a blood request whenever necessary using this module.

Database Module :

- Whenever a registration is made, all the data is stored in the database.
- Upon raising a blood request, data in the database is filtered according to the needs i.e. the same blood group and a distance of <=5km using the API code to find distance between pin codes.

Alerting module :

Once the data is filtered, an alert is sent to all those filtered individuals via this module. When an individual accepts this request todonate blood, another message is sent to all other individuals, to whom the initial alert was sent, saying that the requirement is closed.

X.CONCLUSION

Blood donation saves lives every day in different emergency situations. In the current day scenario, most of the hospitals are facing blood deficit at emergency situations. It Is important that individuals who want to donate blood are aware of this. It is also important that the blood donors reach the hospitals in time at emergency situations. This project aims to solve blood requirement problems. The application is capable of finding blood donors at the time of emergency blood requirements. The application directly connects the blood donors with the hospitals. Whenever a hospital requires blood, it can raise a blood request by filling the necessary details.The application sends an alert message to the registered users with the same blood group as that of the requirement whenever a blood request is raised. This helps solve blood deficiency problems at emergency situations.

References:

1) *Snigdha et al., "Android Blood Bank", International Journal of Advanced Research in Computer and Communication Engineering, vol. 4, no. 11, pp. 86-88, November 2015, ISSN 2278-1021.*
2) *Sultan Turhan, "An Android Application Volunteer Blood Donors", ICBB-2015, pp. 23-30.*
3) *Snigdha et al., "Android Blood Bank", International Journal of Advanced Research in Computer and Communication Engineering, vol. 4, no. 11, pp. 86-88, November 2015, ISSN 2278-1021.*
4) *Sultan Turhan, "An Android Application Volunteer Blood Donors", ICBB-2015, pp. 23-30.*
5) *Arvind Sharma and P.C. Gupta, "Predicting the Number of Blood Donors through their age and Blood Group by Using Data Mining Tool", International Journal of Communication and Computer Technology, vol. 1, no. 02, pp. 6-10, September 2012, ISSN 2278-9723.*
6) *S. Panimalar et al., "Enhancing varaiable volunteered geographic services for searching blood donor using android application", International Journal of Advance Research and Innovative Idea in Education, vol. 2, no. 2, pp. 365-370, 2016, ISSN 2395-4396.*
7) *Tushar Pandit et al., "A Survey Paper on E-Blood Bank and an Idea to use on Smartphone", International Journal of Computer Application, vol. 113, no. 6, pp.48-50, March 2015, ISSN 0975-8887.*
8) *Mayan J Albert and T Ravi, "Structural Software Testing: Hybrid algorithm for optimal test sequence selection during regression testing", International Journal of Engineering and Technology (IJET), vol. 7, no. 1, 2015.*