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Red Drops

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ABSTRACT-

"Blood" one of the most important necessities of our life. The numbers of blood donors in our country areless when compared with other countries. We proposed a new and efficient way to overcome such outline in our project. Such as just registering as donorin Registration module in which donor's details will be collected, like name, e-mail, phone number, blood group, Location etc. At the time of emergency,Recipient can check for donor's list and check for nearby by donors and nearby blood banks and hospitals using GPS based on blood group type and make direct contact with the respective donor or we can also chat with all the donor who are registered in our app. The registered donor can also remove their details by deleting if he/she has donated blood or not willing to donate.

Keywords - Blood, Android/iOS smart phone, Donor, Recipient, Direct Call, Chat, GPS.

INTRODUCTION

Blood donation plays a vital part of worldwide healthcare. It relates to blood transfusion as a life-sustaining and life-saving procedure. One Hundred Million units of blood were donated every year. Blood is essential to help some of the patients to survive surgeries, treatment of cancer, and traumatic injuries. The lifesaving care starts with one person making the blood donation. The need for blood is constant. But only 3 percentage of age-eligible people donate blood yearly.

Why is blood important?

Because, Blood supplies oxygen, nutrients to all the parts of the body to function properly. Blood carries carbon dioxide (CO_2) and other waste materials to the lungs, kidneys, and digestive system which is supposed to be removed from the body. Blood also fights against infections and carries hormones around the body.

I.PROBLEM STATEMENT

In spite of the availability of the potential blood donors not more than 5% of the total Indian population donates blood. Advancement in medical science has increased the blood demand. Also, blood-donors usually don't come to know about the need for blood. These reasons motivate us to develop a more efficient system that will assist the present blood donation system.

II.PROPOSED SYSTEM

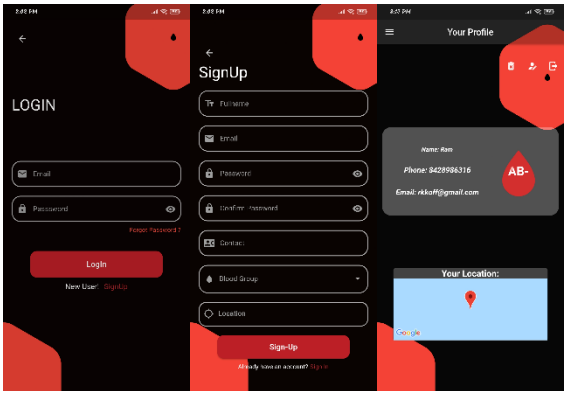
The proposed method is to create an android/iOS application in which the blood donors are available easily at required time. The donor who registers in this application are listed in the donor's section in which we can filter them based on the blood group type. The registered Recipients can able to view the donors list and can also view the nearest donor and nearest blood banks using google maps Api. We used Google map Api to get the fastest nearby response from the server. The purpose of this application is to overcome the difficulties facing during the availability of the rare blood groups. We do to save lives by rapid access to blood-related information anytime, anywhere. Many lives are dying due to unavailability of blood in the blood bank this helps to solve the issue.

III.MODULES

There are six Modules in our proposed method Donor Module, Recipient Module, Chat Module, Nearby Map Module, Direct Call Module, Help & Support Module.

1.Donor Module

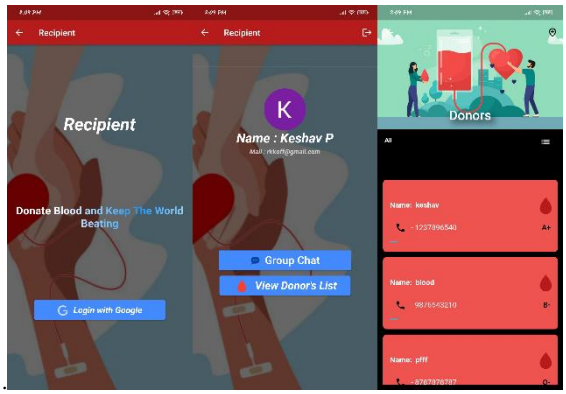
If the user is willing to donate, he/she comes under donor role, in which the user must have an account to proceed further.



Above is the Sign-up and Login-in page of our application. If the user has an existing account, he/she can directly make a login and they can proceed further.After logging in to the Donor tab they can see their Profile page which contains their particulars like Name, Phone, Blood group and Location. If the user is new, they can sign up with their details. The user can also able to edit their profile in this module.

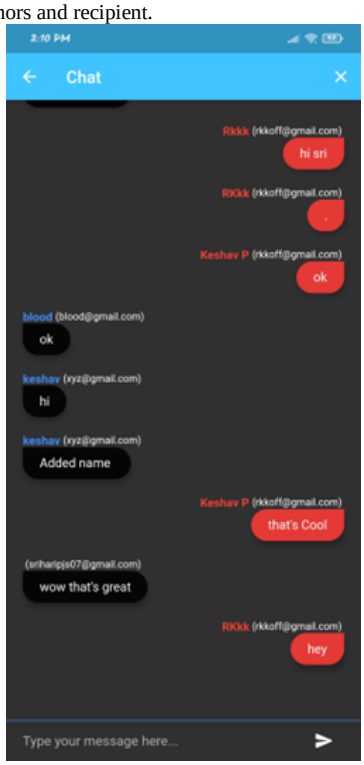
2.Recipient Module

In this module the user can able to sign in with their Gmail. After signing in the user can view the donors list. The user can also filter the donors list based on the blood group-type



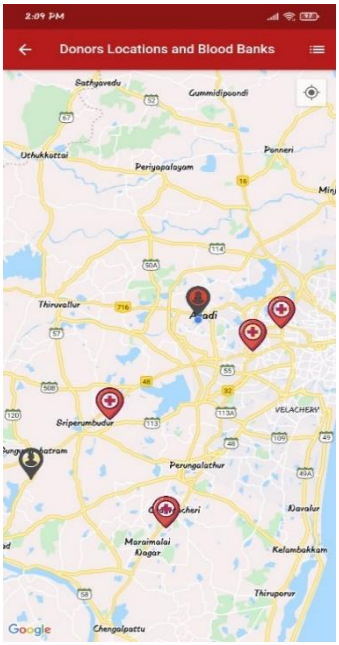
3.Chat Module

In this module the user can able to chat with all the donors and recipient.



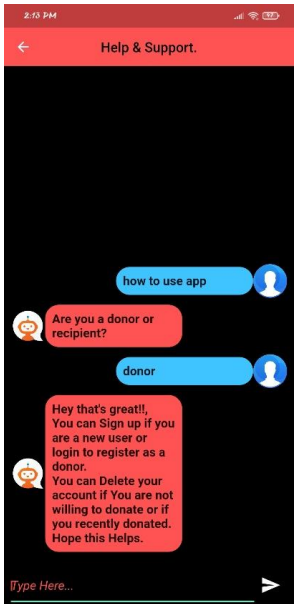
4.Nearby Map Module

In this module the recipient can able to view the nearest donor's location and nearest blood bank's location based on their current location.



5.Direct Call Module
This module helps the recipient to make calls to their respective donor using flutter direct caller package.

6.Help & Support Module
This module is made of using Machine Learning based Dialog Flow Api (chat bot) used to clear the queries raised by the users.



IV.CLASSIFICATION

DIJKSTRA'S ALGORITHM

- Mark the ending vertex with a distance of zero. Designate this vertex as current.
- Find all vertices leading to the current vertex. Calculate their distances to the end. Since we already know the distance, the current vertex is from the end, this will just require adding the most recent edge. Don't record this distance if it is longer than a previously recorded distance.
- Mark the current vertex as visited. We will never look at this vertex again.
- Mark the vertex with the smallest distance as current, and repeat from step 2.

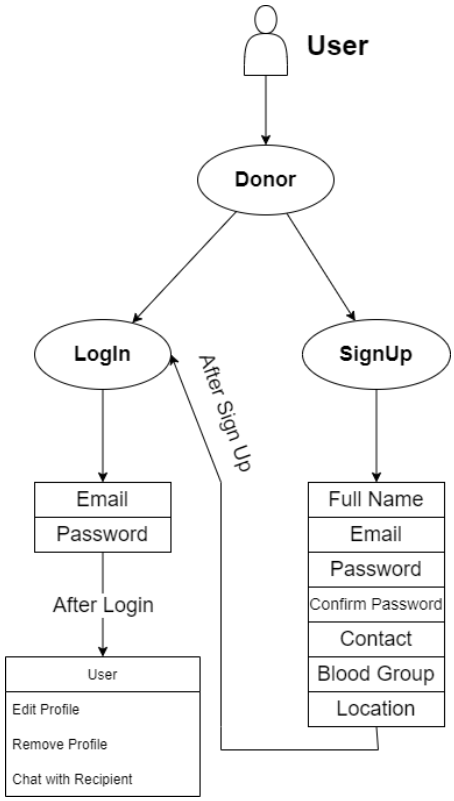
DIALOGFLOW'S ALGORITHM

The Dialog flow Api uses two algorithms to match Intents:

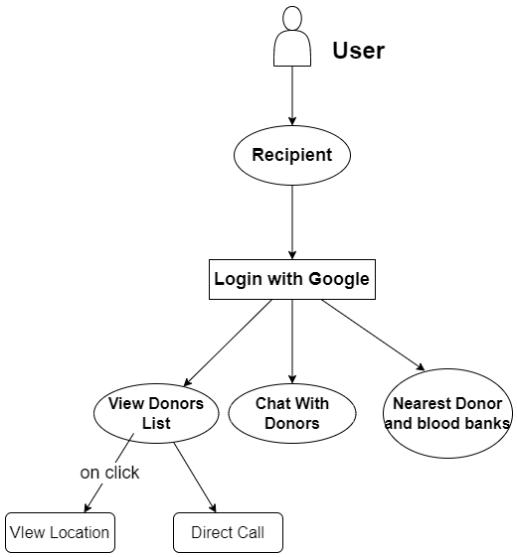
1. Rule-based grammar matching algorithm.
2. ML matching algorithm

V.BLOCK DIAGRAM

1.Donor Block Diagram.



2.Recipient Block Diagram.



VI.CONCLUSION

The main concept of this proposed system is too valuable to health care. By using this application, the existing problem such as mis use of details and wrong information provided to third party is replaced.

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