GOVERNMENT COLLEGE OF ENGINEERING, SALEM.

PLASMA DONOR APPLICATION PROJECT

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ECE IVth year.

LITERATURE SURVEY

1. **BLOODR** project by lakehead university, Canada:

If a patient needs a blood at a clinic, blood donors in vicinity can be contacted through using a clinic management service provided in this application. Registered donors will get notification for the blood requests only if their blood group is compatible with the requested blood type and in the same city/region. Then matching blood donors can go to the requesting clinic and donate.

Donors can be individuals and blood banks. Donor users can register to the application to receive notification about blood donation requests when their blood type is required for an admitted patient to a clinic. Each notification contains information about the required blood type and the clinic address together with a request status as pending if the donation is not done yet. If someone has donated, then the request status is marked as success so that potential donors would receive an updated notification indicating that the blood donation has been made and there is no further donation is required for this particular request. Donor may track his/her donation history details using "Donation History" to avoid such risky intensive donations before that the body can make up its lost red blood cells. Donors can invite friends to register to the application using "Invite Friends" to increase number of donors. When a Donor is notified about a blood request, he/she can book an appointment with the clinic that requested the donation using "Book Appointment feature".

When a patient needs a blood, the clinic where he/she is admitted would request registered volunteers in the same or nearby city/state to donate using the "Send Request" of the app. In some cases, surgeries are scheduled in advance and the blood donation then, if needed, is marked as normal. Once a request is fulfilled, i.e., when a successful donation made, then the clinic can send updated notification to the previous recipients. The function "BloodRequests Feed" is to display requests from other clinics. To enhance the cooperation and communication between different clinics, "BloodRequests Feed" can be used at one clinic to pass the need of other clinics to those potential donors who are unaware of the BLOODR app. Clinics can also see their request history and donation history using "Request History" and "Donations History" features, respectively. Using the history, clinics can know how many requests they requested and how many donations made and analyze the data for further research. Clinics are informed about the appointments scheduled by donors through using "Appointments". As a result, this application can be helpful for clinics to send request to donors, keep track of requests and donations history, and view donor's appointments with a clinic.

Admin user can manage users and analyze data. User management includes adding/deleting co-admin users using "Admin Users" feature. Admin can track the list of donations made at all clinics using "View Donations". This donations' follow up can be used to alert those donors who have frequent donations to avoid risks explained earlier. Admin can also view all requests made by clinics "View Requests". This can be used to alert donors (registered or not) in situations where the donations are not enough to fairly respond to the increasing number of requests. Admin can see the registered donors list using "Donors List" to alert/delete those donors, if necessary, who are inactive for a period of time. Also, admin can encourage those limited number of donors in a specific area/city to invite their friends and relatives to register to the app. Admin can see the registered clinics using "Requesters List" to encourage those unregistered clinics to use this app. Using this data collected from all these admin features, admin can do data analysis.

Reference: https://mhealth.amegroups.com/article/view/16550/16645

2. **Donate plasma** project by team tigers in international flutter hackthon 2020:

The main goal of this project is to make it easier for the COVID-19 patients to get a plasma donor easily and as soon as possible as it is too much difficult to find a plasma donor.The person who wants to donate his/her plasma need to register and create his/her profile first in our application providing required information which are name, blood group, phone number and location. He/She can also share his/her winning story against corona virus to motivate others.Patients who need plasma don't need to create account. They can look for a donor from the home page. Patients can directly call the donor from the application by clicking on the dial button. Patients can also read the corresponding donor's story.

Reference: https://github.com/TeamTigers/donate_plasma

3. **Blood donor app/redcrossblood.org** by American Red Cross:

The American red cross service organisation developed redcrossblood.org and its app version called Blood Donor. This application also works like other applications by gathering basic user information of donors and requesters. This application also has following features,

· Find local blood drives and donation centers quickly and easily
· Convenient, easy appointment scheduling and rescheduling
· Get notified when your blood is on its way to a patient
· Receive appointment reminders and special blood shortage alert messages
· Keep track of total blood donations
· Earn badges for special donation milestones
· Join or create a lifesaving team, recruit other blood donors and view rankings on the Blood Donor Teams Leader board.
Reference: https://www.redcrossblood.com

4. **e-RaktKosh** - A Centralized Blood Bank Management System:

eRaktKosh was an initiative by Ministry of Health and Family Welfare, Government of India, Inaugurated on 7th April 2016. This application also requires user registration. The application uses bio metric Donor Management System for identifying, tracking and blocking donors based on donor's health, donation history etc. It provides features such as blood grouping, TTI screening, antibody screening, component preparation etc. as per the defined processes and rules. A centralized Blood Inventory Management System keeps track of the blood stock across numerous blood banks. Bio-Medical Waste Management System is provided for disposal of discarded blood and other waste generated during this process. It generates of rare blood group donor registries. Alert and Notification System notifies donors at emergency situations. The application is in the form of mobile app and website.

Reference: https://www.eraktkosh.in

5. **CSL plasma**:

This app was developed by Commonwealth serum laboratories (CSL) and launched in 2020. This app notifies donor of their next eligible donation day and gives them insights into the impact their donations are making for patients. It also offers real time updates on plasma centres and alert users to special incentives for donations. The donors can reach out the nearest plasma centre and donate their plasma. Donors can make money by donating their plasma in CSL plasma centre. This application is only for plasma donors.

Reference: https://www.cslplasma.com