

# PLASMA DONOR APPLICATION

## Problem Statement:

To develop a cloud based application which would take the donor details, store them and inform them upon a request.

## Introduction:

During the COVID 19 crisis, the requirement of plasma became a high priority and the donor count has become low. Saving the donor information and helping the needy by notifying the current donors list, would be a helping hand. Traditionally, in order to find a plasma patient, one should look at hospital records and contacting donors who have been recovered. Unfortunately, sometimes those people may not be available at home or would have relocated. As the backup system is weak, this method is not considered as a rapid process to find plasma. In regard to the problem faced, an application is to be built which would take the donor details, store them and inform them upon a request.

## Literature Review:

### PLASMA DONOR APPLICATION USING FUNCTION-AS-A-SERVICE IN AWS:

The main objective of this application is to design a user-friendly web application. This application tries to reduce mortality or help those affected by COVID19 by donating plasma from patients who have recovered without approved antiretroviral therapy planning for a deadly COVID19 infection. It should be noted that plasma therapy is an experimental approach to treat those COVID-positive patients and help them recover faster. This therapy is considered reliable and safe. If a particular person has fully recovered from COVID19, they are eligible to donate their plasma.

In this plasma donor application, persons who wants to donate plasma, can simply upload their covid19 traced certificate and can donate the plasma to the blood bank. On the other hand, the blood bank can invite for the donor and once the donor has accepted the request, the blood bank can add the units they need. At the same time, the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank.

In this system, on receipt of the plasma from the donor, the blood bank verifies the donor's certificate and can make a request to the donor. If the donor accepts the request, they can add the required number of units they required. The hospital can send a request to the blood bank that needs the patient's emergency plasma and to get the plasma from the blood bank.

Following are the sequence of events that will happen during the function of this application.

- On giving the URL to run the application, the system will ask for login details.
- A new user need to register for this and a old user can use the same credentials.
- The blood bank Admin can view the existing and valid donor details and can make request to specific donors.

- Donors also can view these requests from their login, and on the acceptance of any request, the blood bank checks the status of this request.
- The status will change as “pending” or “approved” based on the acceptance and rejection of the request by the donor.
- The blood bank acts as an interface between the hospital and the donor, and there is no direct communication between the donor and the hospital.

The main advantage of this application is the centralized platform for the interaction of donors, blood bank and hospital. Further, it provides an authentication phase in addition to the decision options by the donor and the hospital. Also, the blood bank can provide this service to other hospitals also. In spite of many advantages, this application comes with some drawbacks also. This application is not able to verify the genuineness of the user automatically. That is, it requires various entries and phases by the users to verify their integrity. Furthermore, it requires an active internet connection throughout its operation, which is considered as a constraint for this application.

## **Plasma Donation Website using MERN stack:**

The main goal of this project is to make it easier for the COVID-19 patients to get a plasma donor easily as well as donate plasma if they have recovered. The system targets two types of users: the people who want to donate plasma and the people who need plasma. The user can also view the total active cases, nearby vaccine centers, hospitals address.

The user can also view the total active cases, recovered cases, vaccine centers in their area, hospital location, and helpline number.

The following technology have been used: Frontend : HTML, CSS, React.JS Backend : NodeJs, Express.Js Database : MongoDB

### **Advantages**

- Speed : This website is fast and offers great accuracy as compared to manual registered keeping.
- Maintenance : Less maintenance is required
- User Friendly : It is very easy to use and understand. It is easily workable and accessible for everyone.
- Fast Results : It would help you to provide plasma donors easily depending upon the availability of it.

### **Disadvantages**

- Internet : It would require an internet connection for the working of the website.
- Auto- Verification : It cannot automatically verify the genuine users.

## **Enhanced Mobile Application Development For Plasma, Mother's Milk And Blood Banks**

This paper propose an enhanced mobile application for Plasma, Mother's milk and Blood banks to administrate their users and resources easily and enhance security for information stored on the databases.

The following are this project's objectives :To provide a common platform for Plasma, Mother's milk and Blood Donors, Recipients and Health care system,To track the location of Donors using Maps and Send quick messages via short message service,To advertise and effectively manage Blood/Plasma/Mother's milk camps, To provide scalability and ensure security, To provide health tips and guidelines about PMB donation.

The planned system consists of the subsequent modules: Admin Module ,PMB Bank Module , Donor Module , Recipient Module.

This project is based on Android OS version 6.0+ developed in Android Studio, which enables developers to create high quality applications for Android devices.It is an Android application that uses the Firebase & 000webhost.blogs (web cloud) real-time database to quickly and efficiently search, collect and sort data for each Plasma, mother's milk and blood donor and users.

### REFERENCES:1

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