

LITERATURE SURVEY

I)

Title:

An Instant Plasma Donor-Recipient Connector Web Application

Year:

2022

Authors:

Sanjay Mallisetti, Tejaswini Jalli, Kalpana Devi Guntoju and Sreeja Uppala

Techniques used:

Web Technologies (HTML, CSS and JavaScript), MySQL Database

Description:

In this web application, the donors can register that they are willing to donate plasma to someone in their locality. The patients who are in need of plasma can easily find donors nearby, with matching blood groups and request them. The donors are then notified about the request in their view requests page.

Pros:

The donor needs to upload their Covid-19 negative certificate and it needs to be verified by the blood bank, which ensures safety of the receiver.

Cons:

This system is closed for general plasma donation and is mainly focused on Covid-19 patients. Also, the donor is not immediately notified through a message or email, they should login to the application to view any requests.

II)

Title:

Blood Donation Application for Android - BDoor

Year:

2021

Authors:

Muthukrishnan M, Ramakrishnan M, Periyannayagi S and Manikandan A

Techniques:

Android, Flutter UI Framework (Dart), Firebase

Description:

This blood donor identification mobile app is a ubiquitous app that is designed for the usage of any hospitals, blood banks, blood donors and the users (above 18 years of age) in our country, adhering to the World Health Organisation (WHO) blood transfusion guidelines as well as National Blood Policy of India. This application is centralised for blood donation, allows NGOs and Hospitals to find blood donors in their neighbourhood.

Pros:

The details of the donor are verified before allowing them to donate plasma through the application, which is done with the help of authorised medical institutions.

Cons:

If the firebase server goes down, the end user may not be able to fetch or modify details as the app connects to the server each time to get data without caching it locally on the user's device.

III)

Title:

Developing a plasma donor application using Function-as-a-Service in AWS

Year:

2020

Author:

Aishwarya R Gowri

Techniques:

AWS FaaS, Lambda and EC2 functions, DynamoDB, Web Technologies

Description:

This application helps the users to check the availability of donors. A donor has to register to the website providing their details. The registered users can get the information about the donor count of each blood group. The database will have all the details such as name, email, phone number, infected status. Whenever a user requests for a particular blood group then the concerned blood group donors will receive the notification regarding the requirement. A JSON code is written to store the information, to fetch the requested information in lambda.

Pros:

The app is reliable as it uses the popular AWS web service that can provide quick data retrievals or modifications from/to the database. Also, the requests are sent to the donor immediately as SMS alerts, so that they can reach out to the patient quickly.

Cons:

This application requires the users to register with credentials, so this may not be suitable to find plasma during emergency situations.

IV)

Title:

A Web Based System for the Discovery of Blood Banks and Donors in Emergencies

Year:

2020

Authors:

Babajide Ayeni, Olaperi Yeside Sowunmi, Sanjay Misra, Rytis Maskeliunas, Robertas Damasevicius and Ravin Ahuja

Techniques:

Web Technologies, PHP, jQuery, RDBMS, Google Maps API

Description:

This project addresses the challenges of finding blood during emergencies by creating a system that helps users find the nearest blood banks and donors. Undoubtedly, this approach is faster than utilising the manual methods of searching for blood, thereby reducing the number of fatalities caused by lack of blood or plasma during emergencies.

Pros:

The locations of available donors are shown in the google maps, which enables receivers to easily reach out to the donors by knowing their exact location.

Cons:

Although this application seeks to address issues with blood bank access, it is not designed to deliver the blood to the user.

V)

Title:

Blood Donation App for Android - DWorld

Year:

2019

Authors:

Meiyappan A, Prasanna R, Sakthivel T, Loga Vignesh K

Techniques:

Kotlin, XML, Firebase

Description:

This application searches for the nearest donor accessible, in a flash by following their present area using GPS by utilising Haversine Mathematical Algorithm. It additionally confirms with the Department of Health and Welfare to guarantee the benefactor medical case history. This application decreases the opportunity to a more noteworthy degree that is searching for the blood benefactor of the required blood gathered through the specific area. In this way, it gives the required data in less time. The primary aim of this application is to interconnect all the blood giving benefactors into a solitary system, approving the data to provide healthy blood to the receiver.

Pros:

The application clears up the details of donors after a 90-day period and confirms their medical history with the Health Department to ensure safety of the receiver.

Cons:

This application is only available on Android and it requires the donors to share their location via GPS which can be sometimes inaccurate.

VI)

Title:

BLOODR: blood donor and requester mobile application

Year:

2017

Authors:

Vamsi Krishna Tatikonda and Hosam El-Ocla

Techniques:

Ruby, JavaScript, PostgreSQL, RubyGems

Description:

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. In the online registration, users need to provide information about their blood type and address. Once the user logs in, he would be able to see the latest blood donation requests in their city/region using "BlooRequests Feed". 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.

Pros:

This application provides donation history for donors to avoid risky intensive donations before their body can make up its lost blood cells.

Cons:

The notifications are visible only when the user logs into the website, so they may miss some emergency requests due to the lack of desktop or smartphone notifications.

VII)

Title:

Blood bank smartphone application for managing and organising blood donation

Year:

2016

Authors:

Abdul Rahman Alkandari, Fatma Eisa Alkandari and Altaf Alshammari

Techniques:

Apache, MySQL, Objective-C, PHP

Description:

This project is designed to make finding a blood donor who has an appropriate type of blood and willing to donate easier and time saving by using smartphones running iOS. This project is an application that can only be used by the blood bank employee, and its idea is very simple. Instead of randomly looking for a donor, this program is linked to the blood bank database and will send messages to people who are registered in the blood bank as a constant donor and have the required blood types. It will save time and effort for both the people who are working in the blood bank and those who need blood. Moreover, since this program is linked to the blood bank database, it will directly send messages to the donors as soon as there is a shortage in the blood supply informing them with the type if blood is needed.

Pros:

This application is extremely reliable and fast as it uses SMS for request alerts which can work even without internet connection.

Cons:

The app is only available for iOS.