

## Blood Donation Management System

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### Abstract

Accessibility of blood during an emergency is urgent for each person. Various countries are facing troubles in staying aware of a sufficient stock of blood and ensuring a quick relationship between a contributor and beneficiary, accordingly filling in as an impediment in the current structure. In this study, emphasis has been spread out on application improvement for compact gadgets using accessible programming and henceforth is significant for customers having low gadget memory. In our proposed application, time to perform the task is negligible and all real data about the givers is advised in the beneficiary's cell phones momentarily, consequently laying out a raised interest and legitimate correspondence between the beneficiary and benefactor. Our proposed structure of blood management through an application would be at ease and wastage of blood could be limited at a further degree .

**Keywords** – Web application, Blood Stock Management, Database

### Introduction

The main objective of the Blood Bank Management System is **to manage the details of Blood Availability ,Donor, Recipient,Blood requests**. It manages all the information about Blood , Blood Cell, Stock . The project is totally built at administrative end and user end, thus only the administrator is guaranteed the access and user can also access the donor and recipient details.

It is a **web based system** that can assists the information of blood bank and handle in the blood bank . With this system, the end user of this system can key in the result of blood test that has been conducted to each of the blood bag received by the blood bank.

## Literature Survey

It's a web application using HTML and CSS as Frontend and PYTHON Programming language as Backend work .

[1]. *Sumazly Sulaiman, et al.* (2015) "Blood Bank Management System) is proposed to provide a management functional to the blood bank in order to handle the blood bag. In Kuala Terengganu, East Peninsular Coast of Malaysia has only one government hospital that handles blood bank currently is using a standalone system. This web-based management system was developed to meet the requirements for Sultanah Nur Zahirah Hospital (HSNZ)

[2]. M Sai Tarun<sup>1</sup>, S Ravi kishan<sup>2</sup>, Shaik Azaad Suraz Basha<sup>3</sup>, Shaik Raj Ahammad<sup>4</sup>, U Chandrasekhar<sup>5</sup>, Neha Bagga. (2021). *et. al* Blood Bank Management System on this website, we provide a new and effective method to overcome these situations. These records contain information such as the donor's name, blood type, and email address. Then, your contact information will be displayed on the screen. If you need blood urgently, you can quickly find a contact person who matches a specific or related blood type and contact them through the blood bank website. Blood Bank Management System offers a listing of donors on your city/area.

[3]. Ammar Ahsan (2014) *et. al* Blood Donation Management System is a management system website that enables individuals who want to donate blood to help the needy. It also enables hospitals to record and store the data for people who want to communicate with them, and it also provides a centralized blood bank database.

[4]. Seda Baş, Giuliana Carello, Ettore Lanzarone, Zeynep Ocak, Semih Yalçındağ., *et. al* (2016) Blood Bank Management System Applying optimization methods to healthcare management and logistics is a developing research area with numerous studies. Specifically, facility location, staff rostering, patient allocation, and medical supply transportation are the main themes analysed. Optimization approaches have been developed for several healthcare related problems, ranging from the resource management in hospitals to the delivery of care services in a territory.

## **Problem Statement and Objectives**

### **1. Problem Statement**

Many of the Government and small blood banks are still using the paper pen and some old system to store the the blood units. That's leads to the misuse of records like lack of information about the donors, recipients and blood stocks . The patients can't get the blood in the right time. If there is no computerized system, the communication system getting downword . The old system is space consuming, cost consuming.

### **2. Objectives**

- Management the details of Blood
- Online blood request
- Blood Donor's name registration
- A search column to search availability of blood
- A Blood bank login page where organizations can add blood units being organized in the organization and important suggestions regarding blood bank .

## **Proposed System**

This system's functioning idea is straightforward and simple to implement because all of the modules are user friendly. The suggested architecture of the application in terms of donor and recipient has been visualized. After sign-in, user is redirected to the login or registration page, according to the need. The user is advocated to provide the fundamental details that will get added in the database and will aid in faster information processing. The recipient will be directed to the "Request Blood Page" where the user will provide the required blood group following which a notification will be sent to that individual following which the donor will receive a blood donation request .

After Admin Login, can see Unit of blood of each blood group available, Number Of Donor, Number of blood request, Number of approved request, Total Unit of blood on Dashboard and have access of view, update, delete, approve the blood requests. Can View Donation Request made by donor and can approve or reject that request based on disease of donor. If Donation Request approved by admin then that unit of blood added to blood stock of that blood group. If Donation Request rejected by admin then 0 unit of blood added to stock, Can View Blood Request made by donor / patient and can approve or reject that request. If Blood Request approved by admin then that unit of blood reduced from blood stock of that blood

group. If Blood Request rejected by admin then 0 unit of blood reduced from stock and see history of blood request.

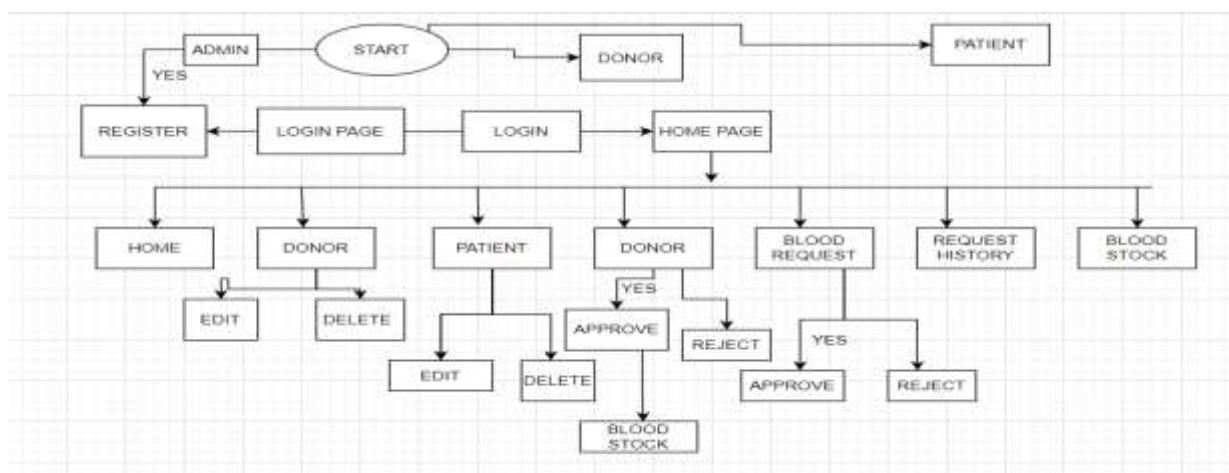
Donor can create account by providing basic details. After Login, Donor can donate blood, After approval from admin only, blood will be added to blood stock, can see their donation history with status (Pending, Approved, Rejected), also request for blood from blood stock and see their blood request history with status. Donor can see number of blood request Made, Approved, Pending, Rejected by Admin on their dashboard.

Patient can create account (No Approval Required By Admin, Can Login After Signup).

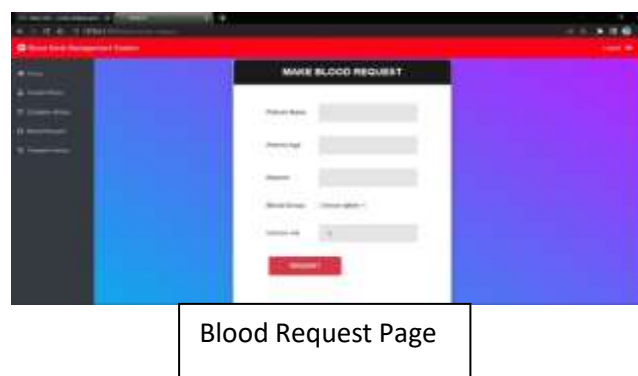
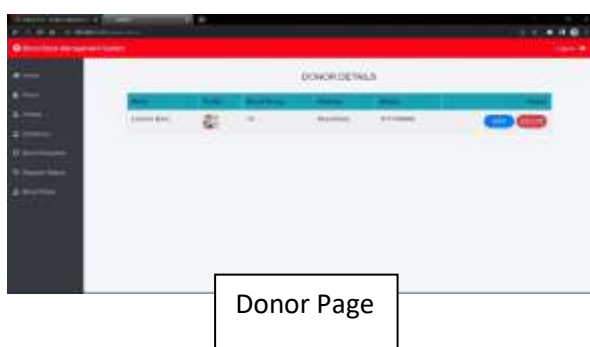
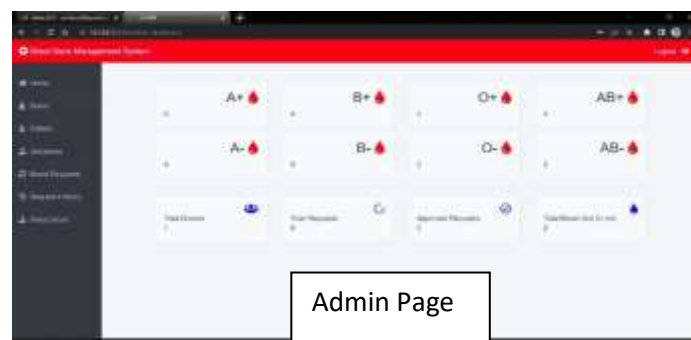
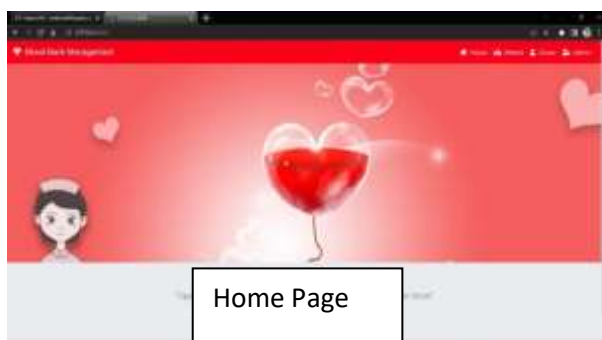
After Login, Can see number of blood request Made, Approved, Pending, Rejected by Admin on their dashboard. Patient can request for blood of specific blood group and unit from blood stock and see their blood request history with status (Pending, Approved, Rejected).

As a result, the automated system is functional. In the event of this system the end user has the whole access of the system.

### Architecture Diagram



## Outputs



## Conclusion

The study adds to recognize individuals with blood necessities by making an easy-to-use interface that will associate all benefactors and beneficiaries in an extraordinary and particular structure. The work of Google Maps in the application will perceive the benefactors who are accessible nearby the beneficiary and henceforth build up successful correspondence inside a concise timeframe. This updates the current standard methodology to an accommodating and customer consistent framework which is monetarily successful and can save thousand lives. Likewise, advancing the availability of the proposed portable application without the necessity of Internet to get the job done the need of blood in common territories is viewed as a future extent of this investigation.

The main applications for this project are for the Government Hospital, Blood Banks, Blood Campaign.

## References

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