

Web-Based Application for Managing Blood Donations

Dhanushkumar S

*Department of Computer Science and Engineering
Shree Sathyam College of Engineering and Technology, Sankari, Tamilnadu, India*

Gopinathan M

*Department of Computer Science and Engineering
Shree Sathyam College of Engineering and Technology, Sankari, Tamilnadu, India*

Sasi Kumar C

*Department of Computer Science and Engineering
Shree Sathyam College of Engineering and Technology, Sankari, Tamilnadu, India*

Abstract- The global blood scarcity has resulted in numerous fatalities, making blood donation and transfusion an extremely serious matter. The main reason why there isn't a centralized system for blood donation is accountable for those damages. Even in this day and age of digital and online procedures, the traditional approaches to blood collection remain unwavering. We have created a website that addresses every single problem pertaining to receiving and donating blood. People would be able to sign up for the proposed system and make themselves available as donors whenever someone in need of their blood type. We've added a search tab so you can look for donors who are available.

Keywords – Analytical Processing, Traditional Techniques, Transfusion, Centralized System And Blood Donation

I. INTRODUCTION

Modern medicine depends heavily on blood transfusions, so it's imperative to make sure that patients in need have access to a sufficient supply of safe blood. Systems for managing donors and blood banks are essential for effectively running the blood supply chain. The manual procedures used in the traditional method of managing and donating blood can be laborious, prone to mistakes and ineffective. The fundamental issue with distributed management is that it taints the blood banking system. The goal of the proposed system is to automate every step of the blood donation and management process, including the registration of donors, blood testing, screening, storage and distribution.

II. A SURVEY OF LITERATURE

Files are the main focus of the blood bank's current storage system. This guarantees that information about blood, donors, and recipients is kept in records and archives. Processing data and information becomes challenging and time-consuming as a result. Physical records of every blood donation and transfusion test are also kept. This renders information vulnerable to mistakes and human error, endangering human life. One more fundamental issue with this framework is its low productivity. It takes a lot of work to recover blood because the process is so time-consuming, whether it is donor or recipient information.

III. EXISTING SYSTEM

Studies on the idea of blood bank administration systems have been written, and almost all of them praise computerization as a tool to achieve productivity and viability in this field while ignoring some problems the system may face because of limitations or misuse of features. We examined a few of the systems that we could find. The advantages of an administration data framework in blood banks are illustrated in "Benefits of Management Information System in Blood Bank" by Vikas Kulshreshtha and Dr. Sharad Maheshwari [5]. The blood bank administration data structure serves as the essential focal point of the paper. It looks at how many Indians generally give blood. The need for blood has grown due to advances in natural science, yet most blood donors are unaware of the need for blood. These causes motivate us to develop a more robust mechanism to support the current blood donation system.

IV. DATA FLOW DIAGRAM

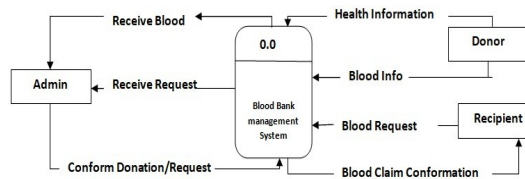


Figure 1 Block Diagram

V. DETAILS OF METHOD

Admin

Dashboard: The administrator can view all the information in this section, including the total number of blood groups listed, the list of registered donors, and the total number of inquiries received.

Blood Group: The administrator can add or remove blood groups in this section.

Donor List: The administrator has the ability to view and remove a donor's details in this section.

Handle Get in Touch Query: The administrator can handle user-submitted queries in this section.

Manage Pages: The administrator can manage website pages here.

Update Contact info: The administrator can make changes to the website's contact information in this section.

Request Received by Donor: The administrator can view the blood request that the donor has received in this section.

User

Home: This page greets both users and donors. Users must register with us in order to donate blood.

About Us: Visitors are able to access the page.

Contact Us: Through the contact us page, users can get in touch with the admin.

Donor List: Viewers and donors can get in touch.

Search Donor: Blood group and city can be used to narrow down the donor pool.

VI. AREA WISE SEARCH

For those wishing to find blood locally, we have also included a search box. We took this action in light of the fact that many people are in urgent need of blood and cannot wait to receive it. They can search and obtain blood nearby and save valuable time with this functionality.

VII. ADVANTAGES

Simple Access: Those who have internet access can readily utilize the blood bank's services from the comfort of their homes, offices, or any other location by downloading the blood bank web app. People will find it simpler to locate the blood they require at the appropriate time as a result.

Real-time information: Hospitals, clinics, and other healthcare facilities can identify and reserve the blood they require more quickly and effectively if they have access to real-time information about available blood units using a blood bank web app.

Enhanced Interaction: Improved customer-blood bank communication can be facilitated by a web application. Without having to give the bank a call or come in person, users can submit requests, schedule appointments, and get updates on their requests.

Saving Time: Customers and blood bank employees can both save time by using a web app. Customers don't have to wait in line or on the phone to find the information they need, and the blood bank staff can handle requests more rapidly.

Safekeeping: Blood banks may manage and safeguard their clients' data more easily by using a web application that offers secure storage for private medical data.

VIII. ADVANTAGES

- Scam Requires
- Internet Access
- Dependability
- Data Accuracy
- Risks to privacy

IX. CONCLUSION

The proposed blood bank and management system aims to automate every step of blood donation and management, thereby increasing its efficiency, economy and error-free operation. The system will put in place stringent testing and screening procedures to guarantee the security of the blood supply chain. In addition, the system will expedite the distribution of blood to hospitals and other healthcare facilities and compile an extensive database of blood donors, including their blood type and medical history. All things considered, the suggested system will help save lives by guaranteeing patients in need of safe blood have a consistent supply.

X. FUTURE SCOPE

Automated Blood Group Detection: This feature will increase the efficiency of the donation process by allowing you to use a donor's phone camera to determine their blood group.

Mobile App Integration: Donors and volunteers can use their smartphones to access the blood bank's services by integrating the web app with a mobile app.

Analytics and Reporting: To find areas for improvement, you can include a feature that allows you to create reports and examine the data that the web app has collected.

Social Media Integration: To spread the word about blood donation and the services the blood bank offers, you can integrate the web app with social media platforms.

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