

Project Title: BLOOD BANK MANAGEMENT SYSTEM

Category: Web Application

PURPOSE

To create a nexus between Blood Banks, Donor and Recipient of a specific Location and to digitize the manual process to streamline the work flow of Blood Banks across that area.

SCOPE

It will ensure proper collection and management of Blood in a specific area which in turn will save many lives in case of emergency as all the records will be digitized, which will reduce the turnaround time of this whole ecosystem. It will enhance the networking of Donor repositories which will restrict professional donors.

INTRODUCTION

Introduction contain the following sub categories

Existing System

The present system is a manual system. Manual system involves paper work in the form of maintaining various files and manuals. Maintaining critical information in the files and manuals is full of risk and a tedious process. Here, the nexus between Donor and recipient doesn't exist, every time Recipient/Donor has to locate manually the Blood Bank and check that the required Blood is available/required or not.

A manual system has following disadvantages

- ✓ Searching of particular information is critical it takes lot of time.
- ✓ Proper safety Donor/Seeker might not be there, amid ongoing pandemic
- ✓ In the manual system total turnaround time will be very high.
- ✓ The existing system need to travel a location check the availability of the Blood
- ✓ The existing system needs to save the information in the form of files.
- ✓ Limited sharing is possible if the data is in the form of paper or disk drives.
- ✓ The manual system gives us less security for saving data, some data may be lost due to mismanagement that means less transparency will be there.

Proposed System

This web application aims to serve the need for accessing blood services amid ongoing pandemic. There are many advantages to everyone involved in this whole ecosystem. The system after careful analysis has been identified to be presented with the following modules:

- **Donor Registration:** Donors can register for donation of the blood.
- **Recipient Registration:** Recipients can register to contact the donors.
- **Search:** By specifying the Blood Group and location clients can find the Donor list
- **Donor:** List of donors will be specified.
- **Record Storage:** The user information files should be stored in a centralized database which can be maintained by the system.

- **Administration :** Administration would be able to keep an eye on the records of Donors/Recipients.
- **Authentication:** Authentication of these donor details will be provided for only registered members.

Advantages for Blood Seekers

Advantages for Blood Seekers are explained below:

- **Ease of Accessibility:** At a time when the country is facing such a pandemic, this Web Application will provide succor to all those who direly require blood.
- **Donor Repository:** Recipient can directly access the repository of Donor which will help in case of emergency which in turn will reduce the turnaround time of the whole process.
- **Single Window System and Transparent :** This Web Application allow blood seeker to obtain blood & brings the added advantage of complete transparency & single window access to the service.

Advantages for Donors

Advantages for Donors are explained below:

- **Restrict professional Donors:** Only registered Donors can participate in the process which will in turn restrict the professional donors to mint money.
- **Safe and adequate Blood supply:** All the Blood samples from Donors will be first tested and then designated accordingly to the Recipient. This will maintain a safe Concatenation with adequate Blood supply.
- **Help in following COVID protocols:** Donor repositories will be maintained , which will help in collecting Blood units from their respective locations

FUNCTIONAL REQUIREMENTS

Functional requirements of our system are explained below.

1. The admin requires Username and password to access all the details of Donors and Blood seekers
2. Donors can register on the portal by entering their required credentials, all their Data will be saved.
3. Recipients can select blood group and location to the donor list of that particular area.
4. All the Blood Banks with their credentials will be displayed on one of the web page on Google Maps
5. There will be one webpage displaying the contact details of the Developer/Administrator in case of any query.

NON-FUNCTIONAL REQUIREMENTS

Requirement that specifies criteria that can be used to judge the operation of a system are called non-functional requirements. Non-functional requirements of our system are mentioned below:

1. **Possess reliability:** Administrator will maintain privacy in case if any client has disease.

2. **Flexible:** will be easy to amend if there's a need of extension and addition of new features in future
3. Recipient details can be accessed by Administrator only.

SOFTWARE TOOLS

Database Server: SQL

Client: Any web browser

Development Tools: Microsoft Visual Studio

Programming Language: Python

Framework: Django

DEPLOYMENT

Operating System Server: Window 10, Linux

HARDWARE SPECIFICATIONS

Accessible on any modern web browser