# Online blood bank management and organ donation

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**ABSTRACT**

A blood bank is a facility that stores and preserves blood resources for use in transfusions. Blood banks keep track of blood supply, patient requests for blood, and donor and receiver records. Blood bank facilities require a reliable system to assist them to handle their everyday operations and transactions. It will automate the process of finding blood in an emergency, as well as keep track of blood requests, donors, receivers, blood donation programs, and blood stocks in the bank. The system's development will replace the manual techniques of operating blood bank centers. The system can be used by blood bank facilities to digitally alter their operations. In one location, the blood bank can keep track of blood stockpiles, blood requests, blood donations, blood donors, and receivers. The system can also be used by blood recipients or patients, as well as blood donors, to process blood requests and donations and successfully speed transactions related to blood requests and blood donations, the system should be installed in blood bank centers. The established system is highly recommended since it ensures secure and quick transactions between donors, recipients, and blood bank personnel. The use of a Blood Bank Management System to replace the manual technique of managing a blood bank's everyday operations and transactions is highly recommended.

The main goal of the project is to design, develop and implement a system that will automate and streamline blood bank management. To make blood bank operations and transactions more efficient by using technology. In the event of an emergency, the procedure of searching for blood should be made easier and more automated. To allow blood banks to keep track of blood donors, recipients, and donations electronically. To provide a centralized platform that allows blood donors and patients to interact with blood banks. Blood Donors will be able to submit their blood donation information quickly and efficiently, as well as wait for the results. They can then go ahead and donate blood if they are accepted. Patients/Blood Recipients, during an emergency, they can quickly and effectively search for blood. They can get a quick response for blood availability in blood banks if they use the system.

Modules:

- Admin
- User
- Donor
- Blood bank
- Organ bank

Admin:

Controls and manages the system.

User:

User registration and login for donors, recipients, blood bank staffs and admins.

Donor:

donor registration and profile management, donor eligibility criteria and screening process, appointment scheduling for blood donation, blood group and donor database management

Blood bank:

Online appointment for donors, blood collection process, post donation care and refreshments, Managing and storage of the issuance of blood, blood requisition submitted by hospitals and clinics, matching and allocation of blood units based on blood type, location and urgency, notifications to donors and blood banks for urgent requests, delivery and tracking of blood units, Allows online transfer of blood from one blood bank to another. Scheduling and management of blood donation drives at different locations. Blood bag management, Automated notifications for low stock levels, Expiry date tracking and management, Notifications to the user in case of emergency

Organ bank:

Online appointment for organ donors, profile management, Notifications to the user in case of emergency

Software Specification:

Front end: HTML/CSS/Java Script

Back end: Python

Mini Project

User:

- Register as donor, blood bank staff and doctors
- Search for blood or organ
- Request blood or organ
- Manage personal profiles

- View donation history
- Receive notifications
- Donate blood or organ

Donor:

- Donor Registration
- Donor Profile management
- Donation history
- Search for blood or organs
- Communication
- Appointment scheduling
- Feedback

Blood bag management:

- Expiry date tracking and management
- Automated notifications for low stock levels
- Notifications to the user in case of emergency
- If a blood bag contains more blood bags than required then it can be transferred to required blood bags.

Blood bank: can add blood stock and reserve blood.

Organ bank: add organ stock and reserve organ.

Technology used:

Remuneration to donors as payments by billing and payment method using payment gateways