**Software Requirement specification (SRS)**

**FOR**

**Blood Bank Management System**



TEAM MEMBERS

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**1. INTRODUCTION**

* The project blood bank management system is known to be a pilot project that is designed for the blood bank to gather blood from various sources and distribute it to the needy people who have high Requirements for it.
* The Software is designed to handle the daily transaction of the blood bank and search the details when required.
* It also helps to register the details of donors, blood collection details as well as blood issued reports.
* The software Application is designed in such a manner that it can suit the needs of all the blood bank requirements in the course of future.
* It will help us to find the Blood group with its most efficient time to take care of the blood and it is more easy to handover the blood to the hospital to help people to get blood on time.
* This all thing is been stored and been seen in this blood bank management system. To help more people trying best to do so.

**1.1 PURPOSE**

Blood Bank Management Software is designed and suitable for several Blood Bank either operating as individuals organizations or part of organizations covers all blood banking process from donors recruitment, donor management, mobile session component preparation, screening covering all test, blood stock inventory maintenance, patient registration, crossmatching, patient issues etc

**1.2 INTENDED AUDIENCE AND READING SUGGESTIONS**

 Anybody can use this blood bank management system to donor as well as who need blood e.g., Public, Hospitals, Blood Banks, etc.

**1.3 PRODUCT SCOPE**

This application is built such a way that it suits for all type of blood bank in future.so every effort is taken to implement this project in this blood bank, on successful implementation in this blood bank, we can target other blood banks in the city. Main modules of the project: This project have the following modules, to manage all the requirements of the blood bank.

1. Blood donor details

2. Donor details

3. Recipient details

4. Blood collection details

5. Blood issued details

6. Stock details

7. Camp details

8. Reports

To manage employees in the blood bank it had the following modules:

1. Employee details

2. Employee attendance details

3. Employee salary generation

4. Employee salary payment

5. Report

**GENERAL DESCRIPTION**

**2.1 PROJECT PRESPECTIVE**

* To provide an efficient donor and blood stock management system to the blood bank by recording the donor and blood details.
* To improve the efficiency of blood stock management by altering the blood bank staff when the blood quantity is low it par level or when the blood stock has expired.
* To provide pure blood with no wastage blood is been collected in different types of packs.
* They are double, triple, and triple (AS), Quadruple pack.
* They provide synchronized and centralized donor and blood stock database.
* To provide immediate storage and retrieval of data and information.

**Functional Requirement Specification (FRS)**

**2.2 Product Function**

|  |  |  |
| --- | --- | --- |
| **Class of use cases** | **Use cases** | **Descriptions** |
| Use cases related to system authorization of system administrator | 1.Login of admin.  2.Change password of admin | 1.Log admin into the system.  2.Change login password of the admin of the system |
| Use cases related to registration of donor | 1.Register the donor by himself. 2.Register the donor by system admin. | 1.store personal, contact, medical details of donors.  2.store personal, contact, medical details of donors. |
| Use cases related to system authorization of the donor. | 1.Login of donor.  2.Change password of the donor. | 1.Log donor into the system.  2.Change login password of the donors of the system. |
| Use cases related to change the registration details of donor. | 1.Change personal, contact details by the donor himself.  2.Change personal, contact details by system admin. | 1. Change personal and contact details of donors. 2. Change personal and contact details of donors. |
| Use cases related to withdraw names from the donor list. | 1.withdraw reg. details by the donor. 2.withdraw reg. details by the admin. | 1.Delete all details of an exact donors bythemselves.2. Delete all details of an exact donors by the system admin. |
| Use cases related to inform blood donation details. | Send blood donation details to the relevant donors | Inform the requirement of the blood group to donors who has same blood group. |
| Use cases related to replace the older HC Certificates. | Replace donors HC  Certificates. | Override the help condition report details. |
| Use cases related to inform blood donation details | Send blood donation details to the relevant donors. | Inform the requirement of the blood group to donors who has same blood group. |
| Use cases related to access the database | Search relevant details from the database. | Search and display relevant details from the database. |
| Use cases related to print statements. | Print the list of newly registered donors, donation details and list of removed name as statements. | Print the list of newly registered donors, donation details, list of removed names of statements. |

**User Roles and Features**

* **Admin Features:**
  + **Manage (create, update, delete) donor and patient records.**
  + **Approve or reject donation and blood requests.**
  + **Update blood stock and view historical data for donations and requests.**
* **Donor Features:**
  + **Register and log in.**
  + **Submit donation requests for admin approval.**
  + **View donation history with statuses (Pending, Approved, Rejected).**
  + **Request blood units if needed.**
* **Patient Features:**
  + **Register without needing admin approval.**
  + **Request blood by selecting the blood group and quantity.**
  + **Track the status of requests (Pending, Approved, Rejected) through their dashboard.**

**System Processes**

* **Blood Donation Process:**
  + **A donor submits a donation request.**
  + **Admin reviews the donor’s medical eligibility.**
  + **If approved, the donated blood is added to the inventory.**
* **Blood Request Process:**
  + **A donor or patient submits a blood request.**
  + **Admin ensures stock availability and approves/rejects the request.**
  + **Approved requests result in blood units being deducted from the stock.**

**3. Non-Functional Requirement Specification (NFRS)**

**3.1 Performance Requirements:**

* The system should handle 1,000 users at the same time with quick responses (under 2 seconds).
* Updates to blood stock (e.g., adding or removing units) should be visible immediately.

**3.2 Security Requirements:**

* User data must be encrypted for protection.
* Secure login systems (e.g., password hashing) should be used.

**3.3 Usability Requirements:**

* The system should be easy to use with a simple interface.
* It must work on popular browsers (Chrome, Firefox) and devices (desktop and mobile).

**3.4 Availability Requirements:**

* The system should be available 99.9% of the time for reliable operation.

**3.5 Scalability Requirements:**

* The system should handle growth in users and blood stock without slowing down.
* Adding new features like new blood groups or extra modules should be simple.

**3.6 Maintainability Requirements:**

* The system should use modular code for easy debugging and updates.
* Regular backups and documentation are necessary.

**3.7 Compliance Requirements:**

* The system must meet healthcare data privacy standards like GDPR or HIPAA to protect user data.