**CSE 471(SEC-03)**

**Course Name: System Analysis and Design**

**Title of the Project: BLOOD BANK MANAGEMENT SYSTEM**

**Group Number: 03**

**Group Name: Team Thanos**

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**INTRODUCTION:** The goal of online blood bank management system is to ensure all the acceptors and donors to find what they actually want in their need of blood. In our country the blood bank management is manual. That is why we will make an online blood bank management system which will help all the users, donors, hospitals and other healthcare facilities. Every project or management system needs some requirements to run or build it. Requirements gathering is the process of generating a list of requirements (functional, system, technical, etc.) from the various stakeholders (customers, users, vendors, IT staff, etc.) that will be used in the system.

“Requirements gathering” can be categorized in some parts which are given below

1. Functional Requirements

2. Non-functional Requirements

3. Hardwire Requirements

4. Software Requirements

5. Performance Requirements

**FUNCTIONAL REQUIREMENTS:**

The Functional Requirements Specification documents the operations and activities that a system must be able to perform. A functional requirement, in a system, is a declaration of the intended function of a system and its components. Based on functional requirements, a developer determines the behavior (output) that a system is expected to exhibit in the case of a certain input. A system design is an early form of a functional requirement. So the functional requirements of blood bank management system is given below.

**1. Login of Admin:** Log into the official blood bank website. System is shown the all features of the system. Click the “Login of administrator”. The system will be asking for the user name & the password. Admin provides the username & the password and then system does authentication. Main application relevant to admin is displayed. If the authorization fails a message will be given to admins that the provided password is wrong.

**2. Change the password:** When admin will choose the change password option the system will show current password, new password, re enter the password to confirm it. After the admin gives all the input the system will start authentication process and store the new password in the database. If this fails a message will be shown that “the current password is wrong” and tell the admin to re-enter the password.

**3. Register the donor by himself:** When someone wants to be a donor he/she must have to click the registration button. After that system will display a registration form and the donor must fill up the form. After that system will do authentication. If everything is filled up then it will show a message that donor registration is completed and store all the details in the system database. If donor doesn’t provide all things a message will be shown and ask again to give all the details that a system needs.

**4. Register the donor by admin:** Admin can also do the registration of a donor by giving all the inputs after verifying it.

**5. Donor:** After the entry in the website a donor can click the donor login button. There they have to provide username, passwords. After verifying it by the system donor can change password, username, contact details, personal details by himself/herself. If anything goes wrong the system will show a message to donor.

**6. Users & hospitals:** Common user can enter the website and they can click the blood group they want. After that the system will show donor with the respective blood and the details of the donor. In the website there will be given the contact information of donor, other blood banks which will help hospital and other healthcare facilities.

**7. Withdraw registration details by donor**

**8. Withdraw registration details by admin**

**9. Connection of other blood banks:** If any blood bank want to connect with our website they have to send a mail to the admin or the authorities with their details. After verifying it the authority will contact with them.

**Non Functional Requirements:**

In system engineering and **requirements** engineering, a **non**-**functional requirement** (NFR) is a **requirement** that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors

There are some key points in Non Functional Requirements.

## **Security:** Security means controlling the user access and safety of users data. We have to keep their addresses and contact numbers private. We are also providing secure communication channel for the data.

**Concurrency and Capacity**: Our system is going to be able to handle multiple computations executing simultaneously, and potentially interacting with each other. There should be minimum, average and maximum number of concurrent users. It also indicating how much data we can store.

**Reliability:** Users have to trust the system, even after using it for a long time. Our Blood Bank Management System is also optimistic in this section. In our system data transferred in a reliable way and using trustfull protocols. It also indicates notifying about the system transactions and processing

**Maintainability:** We need regularly preventive and corrective maintenance. Maintenance might signify scalability to grow and improve the system features and functionalities. Then the system will run well.

**Usability:** A Project success depends on end users satisfaction and acceptance. We gave importance here from the beginning. Taking the user experience requirements into account from the project conception is a win bet, and it will especially save a lot of time at the project release as the user won’t ask for changes or even worst misunderstandings

**Documentation**: Last but not least, our project require a minimum of documentation at different levels. In many cases the users might even need training on it, so keeping good documentation practices and standards will do this task spread along the project development; but as well this must be establish since the project planning to include this task in the list.

**HARDWIRE REQUIREMENTS:**

As it is an online based blood bank management system it requires some hardwire performances. The minimum hardware requirements are,

1. Intel Core i7 7TH generation

2. 8gb DDR4 RAM

3. 1TB hard drive

4. Internet

5. External hard drive

**SOFTWARE REQUIREMENTS:**

1. Operating system: Window 7 & higher

2. HTML

3. CSS

4. Language: Javascript, PHP

5. Database: MYSQL server

**PERFORMANCE REQUIREMENTS:**

The system should run smoothly in any device. The response time for occurs a change will be no more than 4 seconds. The response time for access the database will be no more than 5 seconds. Performance is generally perceived as a time expectation. This is one of the most important considerations especially when the project is in the architecturing phase. Choosing the right technology is crucial at this point.

**CLASS DIAGRAM:**

