Software Requirements Specification

for

Blood Bank Management System

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Content

Chapter 1

Introduction

1.1 Purpose

BLOOD BANK MANAGEMENT is a website which is built in such a way that it could suit all types of blood banks in future. One important future purpose of this website is the availability of location based blood bank details and extraction of location based donor's details which is very helpful to the eligible people. All the time the network facilities cannot be used. This time the donor request does not reach in proper time, this can be avoided through adding some message sending procedure this will help to find a proper blood donor in time. This will provide availability of blood in time.

1.2 Intended Audience

Our Intended audience is:

- Proper blood donor
- Hospital Management
- Blood Receiver / Patient

1.3 Intended Use

This website is intended to monitor Blood Bank data, Blood group, Blood stock, Donor List and Patients who need blood. It manages all the Blood Bank, Donor, Blood stock data. The project is entirely administrative and therefore access is guaranteed only to the administrator. The project's aim is to develop a website which can minimize the manual work for Blood Bank, searching for the Donor, management of the Blood Group. It monitors all of the information of Blood Group, Blood cells, Blood supply and also the list of the Donors. The project will be simple and easy to understand so minimal implementation defects.So, people who require blood can easily use the website to fulfill their requirement. Usability of the website should be easy to the people who require Good interface design with good Good human-computer interaction design.

1.4 Product Scope

This website is built in such a way that it suits all types of blood banks in future. So every effort is taken to implement this project. On successful implementation of the project, we can target other blood banks in the city. This project has the following modules, to manage all the requirements of the blood bank.

- Homepage
- User Sign Up and Login
- About Us
- Contact Us
- Donor Registration
- Patient Registration
- Donor List
- Patient List
- Searching for Blood in nearby location
- Donation List
- Admin Login
- Donation Process
- Logout

Chapter 2

Overall Description

2.1 User Stories

2.1.1 As an outside/inside user

User Story- Anyone who wants to visit the Blood Bank Management web page or get information

As a User:
I want to see the information and also might want to login to the admin panel. But if I only want to see the Hospital's information or about the Blood Bank or their contact no, I can see that in this home page.

Confirmation/Acceptance criteria:

- This homepage is for all users, all can see this page and get an idea about this website.
- Users can see about the work or information about this website.
- They can go to the login page through this page.

2.1.2 As a Donor User

User Story - If anyone wants to register as a donor and want to see the list of types of blood

As a donor User:

First, I have to Sign up and then go to the login page to log in to the system then select the donor registration page for registering my information. Then after doing blood donation, the registration will be successful and I will be able to see my information in the Donor list.

Confirmation/Acceptance criteria:

- Donors can put their information in the registration field.
- If registration is not successful then they have to do the registration again.
- Donors can see all the other donors in the donor list.

2.1.3 As a Blood Receiver / Patient

User Story- I need blood so I want to get the information about the blood group or blood type.

As a blood receiver:

First I have to Sign up and then go to the login page to log in to the system then go to the patient registration page to register as a patient. After finding the required blood group from the Donor list, I have to go to the Donation Process page and see if the Donor is available or not to give blood and complete the donation.

Confirmation/Acceptance criteria:

- Receiver / Patient can find their required blood group.
- They also can see all the Donor List and the Donors who are eligible to give blood.
- Receiver / Patient has to put their information in the registration field.

2.1.4 Searching for Blood in nearby Location

User Story - I need blood in my area so I want to get information about the donors in my area.

As a blood seeker:

First I have to Sign up and then go to the login page to log in to the system then go to the Searching for Blood in the nearby Location page. Then I have to give the location name and the blood group I am seeking then the information will be shown of the Donors in my area or area closest to me.

Confirmation/Acceptance criteria:

- Users can search for blood in their area to see if any donor is available.
- Users can see the contact information of the donor who is living in that area.
- Users have to Sign up and login to the website.

2.2 User Classes and Characteristics

In Blood Bank Management System there shall have three types of users in the system:
System owner and System user. Here the system admin and the donor are the system users.
Admin has full privilege on the system's functions.They also have control and knowledge of the entire system and the Public can view the blood donation events and donate or can make requests for donation (Donor and Recipients fall under this category).

2.3 User Needs

- To provide a means for the blood bank to publicize and advertise blood donation programs.
- To provide an efficient donor and blood stock management functions to the blood bank by recording the donor and blood details.
- To improve the efficiency of blood stock management by alerting the blood bank staff when the blood quantity is below its par level or when the blood stock has expired.
- To provide pure blood with no wastages blood is collected in different types of packs. They are double, triple, and triple (AS), quadruple packs.
- To provide synchronized and centralized donor and blood stock databases. To provide immediate storage and retrieval of data and information.

2.4 Operating Environment

Software Requirements:
Operating System : Windows Xp, Windows 7/8/10.
Front End : PHP.
Back End : My Sql.
Technology : Wamp Server.
Hardware Requirements: Processor : i3 ,

Hard Disk : 80 GB ,
Memory : 1GB RAM.

2.5 Constraints

- End user’s will not be able to get the information about the availability of the blood in the bank of which he/she has donated.
- Only the Admin has all right to edit the things in the End User’s Profile.
- GUI will be only in English so another language user can't use this system properly.

2.6 Assumption

There are:

- Every donor has a mobile phone.
- The system doesn’t keep the details of the gathering stock of blood.
- The system database will be accessible in real time.
- The donor doesn’t submit any fake reports to his system.
- The donors who want to contribute to a donation will definitely reply to the request of the system.
- The installation of the system to the website server hasn't been considered as a process inside the system. That process will be done by the authorities who control the website Therefore, in here the installation the process is considered as a process which is outside of the scope.
- A doctor or a patient can request an exact blood group. But the request comes through blood bank authorities to the system admin. Therefore, doctor, patients are not direct users of the system.

Chapter 3

Requirements

3.1 Functional Requirements

3.1.1 Sign Up

The system provides security features by taking Username-Passwords from the users and makes the parts of the system.Anybody Donor or patient can be a user to the system and the system would be accessible only to the users.
Input:- First Name, Last Name, email, Password
Output:-Registration Successful.

3.1.2 Login

The system provides security features through username-password matching where only authorized users can access the system with different authorization levels. Admin Input:-Username, Password Output: - Invalid or Update Blood Details, logout

3.1.3 Donor Profile Registration

This allows the healthy public to register as volunteer donors. Input:- Donor/ Recipient Id, Name, Date of Birth, Sex, Blood Group, Address, Contact Number, Email Address, Diseases (if any),Aadhar Card No. Output: - Successfully Registered

3.1.4 Blood Search

This allows the public to search for the required blood donor if present in their area. Input:- Blood Group, Location. Output:- Information of the donor in that area.

3.1.5 Donation Process

In the donation process the admin has to take the donor eligible for donating and the patient's id and match their blood group then donation process takes place. Input:- Donor ID, Patient ID, Match Blood Group. OUtput:- Donation Successful.

3.1.6 Reporting

The system is able to generate pre-defined reports such as the list of donors, recipients,staff, the blood quantity in the bank and charts. Input:-Admin Username, Admin Password Output:-Today's Report, Month Report, Year Report.

3.2 Non Functional Requirements

A characteristic of a quality SRS is that in addition to describing the functional requirements of a system, it will also provide detailed coverage of the non-functional requirements. In practice, this would entail a detailed analysis of issues such as availability, security, usability, and maintainability. However, as this document is only an outline specification, It doesn't contain the same degree of rig that would normally be expected in a formal SRS. Therefore, the sections below should be seen as indicative rather than providing specific (i.e. Testable) requirements.

3.2.1 Performance

The system is interactive and the delays involved are less. When connecting to the server the delay is based on editing the distance of the 2 systems and the configuration between them so there is a high probability that there will be or not a successful connection in less than 20 seconds for the sake of good communication.

3.2.2 Security

The system uses SSL (secured socket layer) in all the transactions that include any confidential customer information. After a period of inactivity, the system must automatically log out all customers.

3.2.3 Availability

At all times the system should be available, meaning the user can access it using an application. A replacement page will be shown in case of a hardware failure or database corruption. Also in case of a hardware failure or database corruption,

backups of the database should be retrieved from the application data folder and saved by the administrator. It means availability will be 24x7.

3.2.4 Reliability

As the system provides the right tools for solving problems, it is made in such a way that the system is reliable in its operations and for securing the sensitive details.

3.2.5 Safety Requirements

Blood bank modules maintain details about the donors and recipients. These blood bank modules are linked to other modules in the software for wards and OT in the hospitals, whereby any and all blood requirements using surgeries etc. What happens in the hospitals is known as to the bank. Important information and parameters such as availability of blood, cross-matching between donor's and recipient's blood groups and blood transfusion reactions are recorded. Also, the interactions with other blood banks within hospitals or outside and delivery/recipients of blood bags between these banks or hospitals are recorded and maintained.

- The blood request queue screen, from where all the daily transfusions can be handled.
- Fresh blood and stored blood request processing.
- Blood returns are made easy in the blood bank management system.
- Transfusion detailed and charging.
- Destruction Details.
- Blood bank management system is integrated with the lab module for blood cross match and grouping.

Appendix

Glossary

With the theoretical inclination of our syllabus it becomes very essential to take the most advantage of any opportunity of gaining practical experience that comes along. The building blocks of this Major Project ”BLOOD BANK Management System” was one of these opportunities. It gave us the requisite practical knowledge to supplement the already taught theoretical concepts thus making us more competent as a computer engineer. The project from a personal point of view also helped us in understanding the following aspects of project development.