Software Requirements Specification

For

Blood Bank Management System

Table of Contents

1.Introduction

1.1 Purpose

The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

1.2 Document Conventions: font: TNR 12

1.3 Intended Audience and Reading Suggestions:

The document is intended for all the stakeholders customer and the developer **(designers, testers, maintainers)**. Knowledge and understanding of UML diagrams is also required.

1.4 Project Scope:

 The Blood Bank website is to create an e-Information about the donor and organisation that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any person requires blood can also register with this site. Moreover if any general consumer wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

2. Overall Description

2.1 Product Perspective

Communication interface: The blood bank system communicate with the organisation via a communication network.

Software interface: The messages sent via the communication network are specific to the target software systems.

Hardware interface: The software will run on any computer or laptop.

User interfaces

Donor: The donor user interface should be intuitive, such that 99.9% of all new donors are able to complete their donations without any assistance.

Consumer: The consumer user interface should also be intuitive, such that all consumers are able to complete their requests with ease.

Admin: The admin is responsible for adding new blood camp informations to the website. A maintainer should be possible to check and resolve any issues in blood donation/consumption within minimal time.

2.2 Product Features

The website should work 24 hrs. The website identifies a customer by a username and password. It collects information about the person's personal details, medical history, communicates the request information to the admin, and makes a request to dispense blood to the customer/update information about the donation. The website requires appropriate record keeping and security provisions. The software must handle concurrent accesses to the same account correctly.

2.3 User Classes and Characteristics

Characteristics: There are several users of the blood bank website:

__Donors__ are simply members of the general public who donate blood.

__Consumers/Acceptors__ are simply members of the general public who request for blood.

__Admin__ must be experienced administrator, to be able to be able to resolve any kind of issue.

2.4 Operating Environment

The software, hardware and technology used should have following specifications:

Software Requirements:

Name of Component	Specifications
Operating System	Windows, MacOS, Linux
Web Server	Apache
Database	MySQL Server
Browser	Any of Mozilla, Opera, Chrome, Safari, etc.

Hardware Requirements:

Name of Component	Specification
Processor	Intel Core i3 or higher
RAM	512 MB
Hard disk	25 GB
Monitor	Colour monitor

Technology Requirements:

- HTML5

- CSS3

- JavaScript

- PHP

- MySQL

2.5 Design and Implementation Constraints

- Login

Validate for User Account:

- Validate for valid username credentials

- Validate for valid password credentials

Validate for Locked Account:

- Validate that account is not locked

- If account is locked, prompt error message "Account is locked"

Lock Account:

- If number of consecutive unsuccessful logins exceeds three attempts, lock account

- Maintain consecutive unsuccessful login counter

- Increment login counter

- Reset login counter to 0 after login is successful

- Get access to the website

2.6 Assumptions and Dependencies

- Hardware never fails

- Limited number of blood donations in a period

- Age limit for blood donations

3. Specific Requirements

3.1 Functional Requirements

Functional Requirement 1:

- **Login**

  The system provides security features through username-password match

  Input: Username, Password

  Process: Validate username, password

  Output: Login successful or retry

Functional Requirement 2:

- **Profile Registration/Sign up**

  This allows public to register themselves online

  Input: Personal details, Medical history details

  Process: Validate with existing users

  Output: Registration successful or User already exists

Functional Requirement 3:

- **Donation Record**

  This allows public to maintain a record of their donations

  Input: All details required in the form

  Process: Validate form

  Output: Record saved successfully

Functional Requirement 4:

- **Blood Request Form**

  This allows public to request the blood as per requirement

  Input: All details required in the form

  Process: Validate form

  Output: Record saved successfully

Functional Requirement 5:

- **Blood Donation Camp Details**

    This allows public to get information about upcoming blood donation camps

    Input: Donation camp

    Process: Check for donation camps

    Output: Donation camp details

Functional Requirement 6:

- **Change Password**

    This allows user to change their password

    Input: Old password, New password

    Process: Validate old and new password

    Output: Password changed successfully

4. External Interface Requirements

4.1 User Interfaces

The user interface should be intuitive, such that 99.9% of all new donors are able to complete their donations/requests without any assistance.

4.2 Hardware Interfaces

The Hardware should have following specifications:

- Ability to read the screen content

- Ability to fill in the forms

- Proper internet connectivity

- Ability to take input from user

- Ability to validate user

- Ability to connect to organisation's network

4.3 Software Interfaces

The software interfaces are specific to the blood bank management systems.

- Must be reliable

- Must re-useable

- Must be available all-day

5. Other Non-Functional Requirements

5.1 Performance Requirements

- It must be able to perform in adverse conditions like high traffic, etc.

- Uninterrupted internet connection

- Good data transfer rate

5.2 Security Requirements

- Users accessibility is censured in all the ways

- Users are advised not to tell their password to anyone

- Users are advised to use strong passwords

- The maximum number of attempts to enter password will be three

5.3 Software Quality Attributes

- Security

- Performance

- User-Friendly

- Attractive

- Availability

6. Other Requirements

6.1 Database

The website must be able to use several data formats according to the data formats that are provided by the databases of different organisations. A record should have all the properties of a data base record (Consistency, Isolation, Durability, Atomicity).