Blood Donation Management System

Software Requirement Specification (SRS) Document

Sprint-2 Implementation

Project Timeline: 07.09.2022 to 25.09.2022

INDEX

1 Introduction: -

The introduction of the software requirement specification provides an overview of the entire software. The entire SRS with overview description purpose, scope, tools used and basic description. The basic building aim is to provide blood donation service. Online Blood Donation management System is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and help them manage in a better way, as online blood donation management system make the process more effective.

The Blood donation system project report contain information related to blood like

- Blood type
- Donors Information
- Available Blood group

1.1 Purpose: **-**Blood Donation Management System 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 blood stock maintenance, patient registration etc.

In this project mainly 3 modules are there:

1. Admin
2. Donor
3. Receiver

1.2 Project Scope: -Blood Donation Management System is a software application to build such a way that it should suits for all type of blood banks in future. One important scope is availability of location-based blood bank details and extraction of location-based donor's detail, which is very helpful to the people.

1.3 Glossary and References:-

https://www.nhs.uk/conditions/blood-groups.com
https://www.blood.co.uk/why-give-blood/blood-types.com
https://www.ncbi.nlm.nih.gov/books/NBK525967.com

1.4 Intended Audience: -

- Donor
- Consumer
- Admin

2. Overall Description: -

A Online Blood Donation management system tracks Donor database, Consumer database and Daily donations information. It is a file that is made on the basis of daily registration of donor, including Donor names and address, Donor Aadhar Number, Donor Age, Blood group and auto allotted donor Id. The donor is auto-alloted a donor-id as first 2 letters of his name+first 4 digits of his aadhar number. Ex- name SHAM and Aadhar is 123456 so the reg id will be SH1234.

The details are stored in the donor database which will also have a field called no. Of units donated,which will be 0 at the beginning.

2.1 User Needs: -

Donor:

- Aadhar no. (6 digits and unique)
- Name and Address
- Donor age (should be more than 18)
- Blood group (A+, A-, B+, B-, O+, O-, AB+, AB)
- Auto-alloted donor ID

Receiver:

- Aadhar no. (unique)
- Blood Group required
- List of available donors with there reg-Id

Employee:

- Donor File Maintenance
- Carry Out Donation

- See the Report for days Donation
- See the donor's report (Donated more than 3 times)

2.2 Assumptions and Dependencies: -

- The service is used preferably on a desktop or laptop.
- User has the latest version of Ubuntu Linux/Windows installed.
- Client has either an 4GB or more RAM.

3. Detailed feature and requirements : -

3.1 Functional Requirements:

3.1.1.BDM_01 Donor Registration :

A donor can register by entering the details, there Aadhar no. (6 digits and unique), Name and Address, Age (should be more than 18), blood group which should be any of A+, A-, B+, B-, O+, O-, AB+, AB-.

Donor is auto-alloted a donor-id as first 2 letters of his name+first 4 digits of his aadhar number. Ex- name SHAM and Aadhar is 123456 so the regid will be SH1234.

The details are stored in the donor database which will also have a field called number of units donated,which will be 0 at the beginning.

3.1.2. BDM_02 The Receiver Enquiry & Registration :

Receiver has to enter his aadhar no, and then the required blood group which are validated. Aadhar no. Should be unique and blood group should be a validated one.

Receiver will be presented with a list of available donors with their reg-ids, On selection of one reg-id his donation appointment is confirmed and then these details are stored in a transaction file called daily_donation which gets created every day for the day's process also a Receiver is allowed only one registration.

3.1.3. BDM_03 The Employee Corner :

The admin can access this part of the system after logging in with a password.

a) Carry Out Donation : The donation process carried out automatically by reading each record from transaction file daily_donation and displaying all details one by one. For each donor his no.of units donated field will be incremented.

b) See the Report for days Donation : Here the report will contain the details of a day's donation i.e, receiver aadhar no., donor's name and blood group . No donor should be allowed to donate more than once on a day.

c) See the donor's report: Should show a detailed report of donors who have donated more than 3 times. The Heading of the report should read "Regular Donors List"

d) Donor File Maintainance: Here the admin can edit or remove any donor details from the donor's database along with a view option to see the details of all donors.

3.2 Non Functional Requirements:

1. Availability:

The system is available online for 24/7 that should have all the information of blood donation.

2. Security:

The admin corner of the system is available only when the admin logins with a valid password.

3. Complexity:

Since the donation process is online multiple requests might come at the same time for the same donor or blood group which might lead to a concurrency problem. Make sure to use proper mechanism to prevent concurrency issues.

4. Correctness:

The blood group required by the receiver should match with the blood group present in the blood donation system.

5. Maintainability:

The employee should maintain donors details from the donor's database which include editing, removing and viewing the details of all donors.

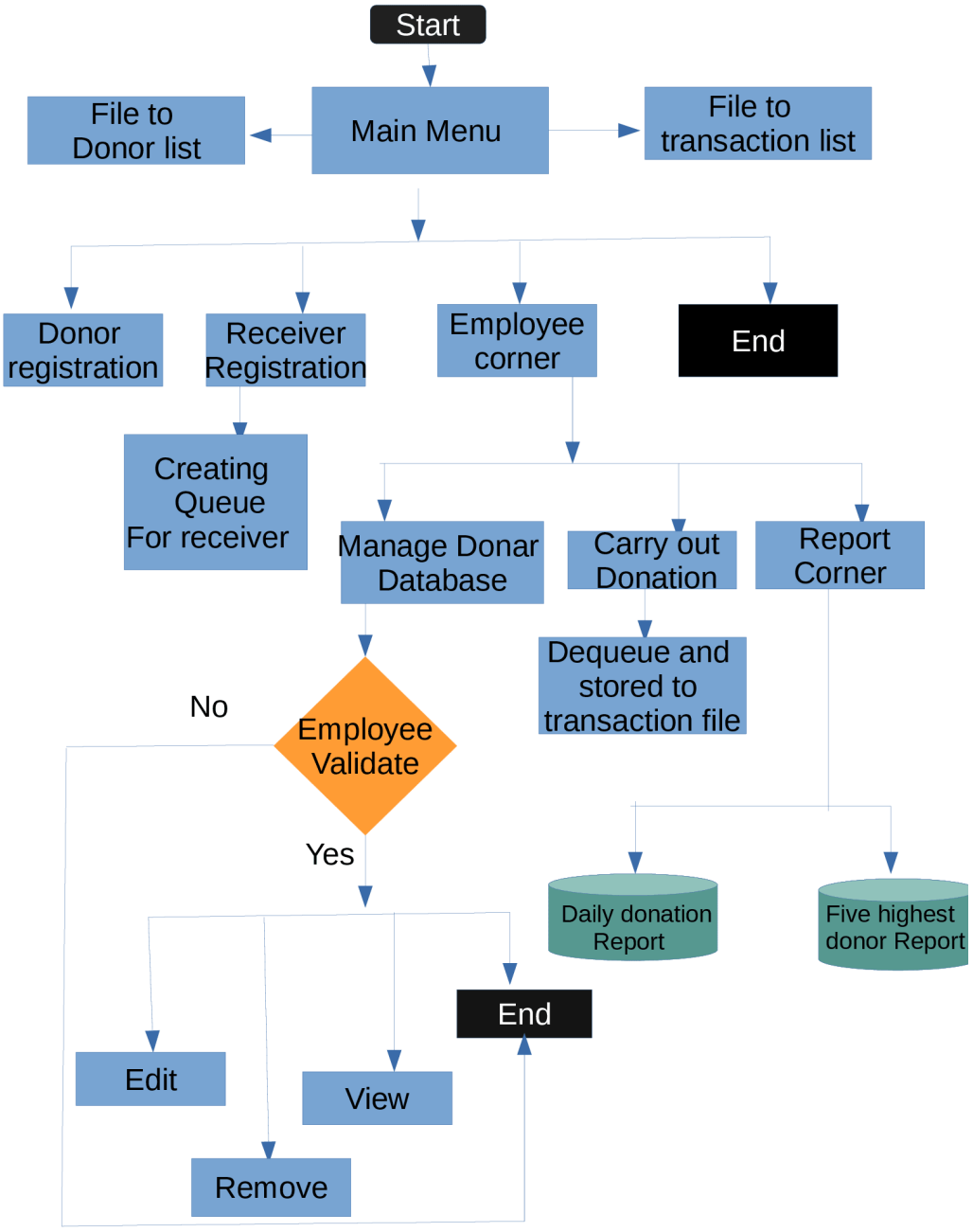
3.3 : -External Interface requirement

Tools to be used:

- C++ File Handling
- C++ Language
- Valgrind
- Splint
- Cppunit
- Gcov
- GIT
- Gprof
- Cloud System
- IP address : 34.133.94.211

4. Analysis Model

flow chart


Start
File to Donor list
Main Menu
File to transaction list
Donor registration
Receiver Registration
Employee corner
End
Creating Queue For receiver
Manage Donar Database
Carry out Donation
Report Corner
Dequeue and stored to transaction file
No
Employee Validate
Yes
Daily donation Report
Five highest donor Report
End
Edit
View
Remove