Blood bank venture framework

Vikrant Kumar Kaushik
vrij.v.k@gmail.com
SRM Institute of Science and Technology, Chennai, Tamil Nadu

Arjun Kumar Gupta
arjunjun2020@gmail.com
SRM Institute of Science and Technology, Chennai, Tamil Nadu

Ashish Kumar
contactashish161@gmail.com
SRM Institute of Science and Technology, Chennai, Tamil Nadu

Abhishek Prasad
a.a.cool.p@gmail.com
SRM Institute of Science and Technology, Chennai, Tamil Nadu

Brindha
brindharajan93@gmail.com
SRM Institute of Science and Technology, Chennai, Tamil Nadu

ABSTRACT

Blood Bank Venture Framework web application keeps up an online library of blood donors in a city/state or region. There are times when Doctors and Blood bank venture need to confront the trouble in finding the blood among Donors at the appropriate time. Blood donation venture framework has endeavored to give the required response by taking upon itself the process of gathering Blood donors across the country for the cure of those who are in need. At any moment the patients who are in need can apply for a donation through the web application and connect with the right donor. Based on humanity, anybody can enlist as a blood donor. The donors are accepted only after their blood sample tests and also based on their medical history. The general population who are non-benefactors can likewise assume an essential part of the proposed framework. Simply by registering their blood type, they can help in identifying the proportion donor of blood types needed in an area. Blood Bank Venture Framework (BBVF) is a web application program that is intended 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. The aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle free and corruption free and make the system of blood bank management effective.

Keywords: *Blood Donation, Management System, Blood Groups, and Blood Bank, etc.*

1. INTRODUCTION

The blood bank is a place where blood bag that is collected from blood donation events is stored in one place. The term "blood bank" refers to a division of a hospital laboratory where the storage of blood product occurs and where proper testing is performed to reduce the risk of transfusion-related events. In the before the blood is supplied to the patients, the blood will undergo several tests to ensure that the blood receiver is not infected by serious diseases. There are a few units operating in this department such as Blood House Unit, Blood Transfusion Unit, and Blood Distribution Unit. Blood Bank Venture Framework (BBVF) is a web-based system that can assist the information of blood bag during its handling in the blood bank. The prime focus of BBVF is to manage blood donors based on their relative blood types. Which means that the donors of least common blood types will be encouraged to donate more as compared to most common blood types. With this system, the user of this system can key in the result of a blood test that has been conducted to each of the blood bag received by the blood bank. The result of the test will indicate whether the blood bag can be delivered to patient or not. From this system, there are several types of report that can be generated such as blood stock report, donor's gender report and the total of blood donation according to months and year. The system also can give the information to the donor about blood analysis test result for each time the donor makes a contribution. The Hence, BBVF will make the blood bank stock more systematic and manageable, keeping in mind the proportion of different blood types.

2. PROBLEM STATEMENT

The level of individuals giving blood is expanding step by step because of attention to give blood for those required. The blood got must be overseen completely so that there will be no negative impact on the blood beneficiary once they got blood. The blood donation occasion plan is typically publicized to people in general with the goal that they know about the importance and necessity of donating blood for the people in need. General society is still very hesitant in coming forward and donating. There are promoting handouts provided to regular donors that are yet not available to general society since they are just accessible at blood donation centers or hospitals. Thus, general society is not getting any information about blood donation unless they go to the blood donation center or hospitals.

To address this issue, the BBVF interface will be developed for the blood donation administration to post about the blood donation occasions.

Another issue that comes to blood donation is the fact that the right blood type might not be available at the time of need. To solve this problem, BBVF will carry out a survey among its donors and the general population of a region to find out the proportion of blood types among people. Based on this, a specific blood group which is less common can be encouraged to be donated more. One of the factors of the general population is hesitant to donate their blood is because of the existence of some myths. Thus BBVF ought to give more data with a specific end goal to teach people in general so they know blood gift won't give awful impacts. By offering attention to general society, this will build volunteers to give their blood.

3. LITERATURE REVIEW

In "Android-Based Health Application in Cloud Computing For Blood Bank" by Sayali Dhond [1] has proposed android based application. In " An Android Application for volunteer Blood Donors " by sultan Turhan [2] proposed an application for volunteer blood donor, the main aim of this application is to notify regularly the donor location to Rh++.Rh++ is a smart information system which aims to control the blood donation and blood supply chain. LBBRF is a private organization that functions as a place to donate blood. They give a charge to the person or patient that is in needs of blood. However, the money that they collected is not for the profit for them but for recover the expenses incurred in recruiting and educating donors. This is also to ensure that the blood transfusion is as safe as possible. In Lions Bank & Research Foundation, they will make sure the availability of blood stock in their blood bank. They also published the current status of blood stock on their website homepage. This is for them to keep the website visitor especially donor informed about the needs of blood. They also inform the donor and the public where and when is their next event. However, this blood bank does not provide any facility for the donor and the patient. Therefore, they cannot know how many times that they have donated their blood. As for the donor, they cannot know their blood screening result for each time they donate their blood. Without having this function in the system, the donor cannot monitor his or her health condition. This will make the donor become unaware of their health condition.

4. OBJECTIVE

The primary target of this application is to promote more and more people to donate blood while maintaining a proper ratio between the different blood types and their requirements by patients at the time of need. The system provides online information of blood bank, donor, patient request and blood requirements. To build up an online entry to encourage healthy individuals to donate blood. It effectively empowers intentional blood donors, spur and keep up a properly filed record of blood donors and instruct the group on the advantages of blood donation. This will likewise fill in as the site for the cooperation of best practices in diminishing superfluous use of blood and enable the state to work with more proficiently towards independence in blood.

The framework will give the client the alternative to take a look at the points of interest of the current Donor List, Blood Group and to include another Donor. It additionally enables the client to adjust the record. The overseer can adjust all the framework information.

5. EXISTING SYSTEM

In the existing framework, the blood donation center administration framework displayed a great deal of insufficiency and wastefulness. The framework which was manual depended on paper to gather blood giver information, keep a record of blood givers and scatter results to blood contributors, had the shortcoming that required IT based arrangements. The framework was portrayed by delays and infrequently inability to get to authentic records. Blunders were seen in section and manual investigation of results, mystery, and privacy of records needed in light of the fact that unapproved people could without much of a stretch access the records.

Disadvantages:

- Without integrating the blood banks will lead to time-consuming while searching for a particular group of blood.

- Without having proper information, it is very difficult to supply the blood to the required people.

- Information sharing is not possible among blood banks, hospitals about the required blood group in the case of urgency.

6. PROPOSED SYSTEM

The proposed Blood Bank administration framework helps the general population who needs blood by giving them all points of interest of blood donation accessibility. Our site works 24x7 so client can get data of blood donor whenever and wherever. Blood donor can likewise get enrolled and spare existence of other individual. At the point when blood is required in the activity at that

point individuals have less time to get the blood accessible so there is less chance that he get the data of who can give him blood in time in his city is life spared.
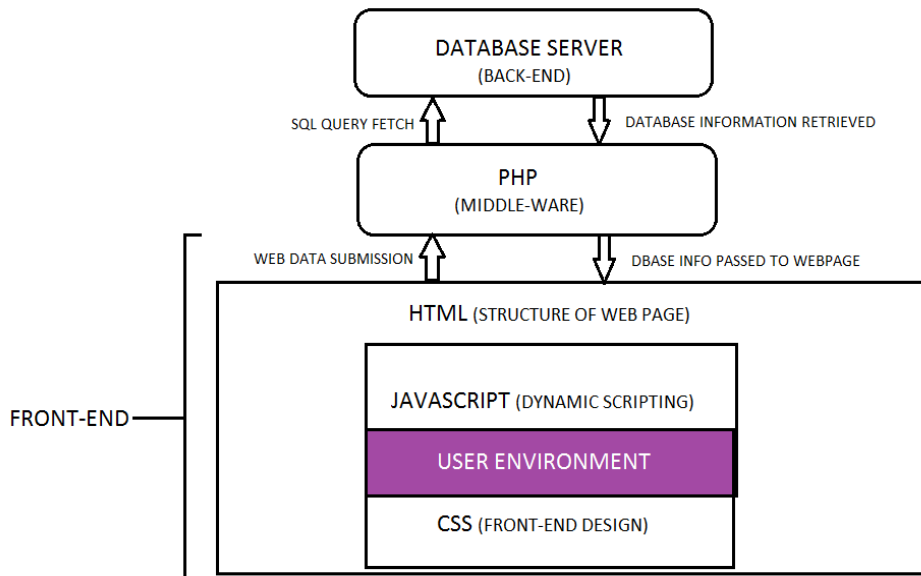
Advantages:

- Speed and accuracy as there is no redundancy of data.

- It will be easily handled.

- The proposed method would be error free and it is very easy to operate.

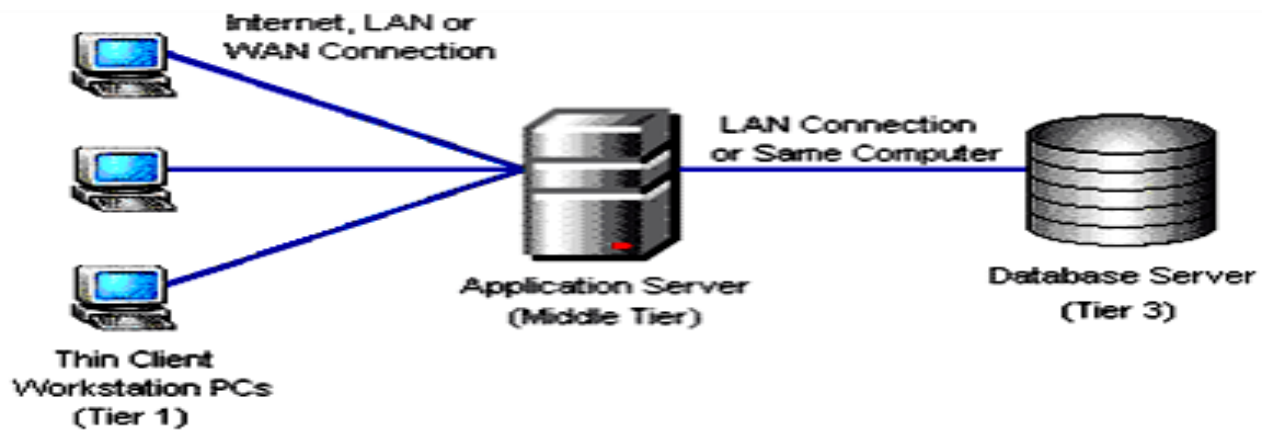- Reduce the Time spend on the paper work.

7. ENTITY RELATIONSHIP DIAGRAM

Blood Donation And Management System
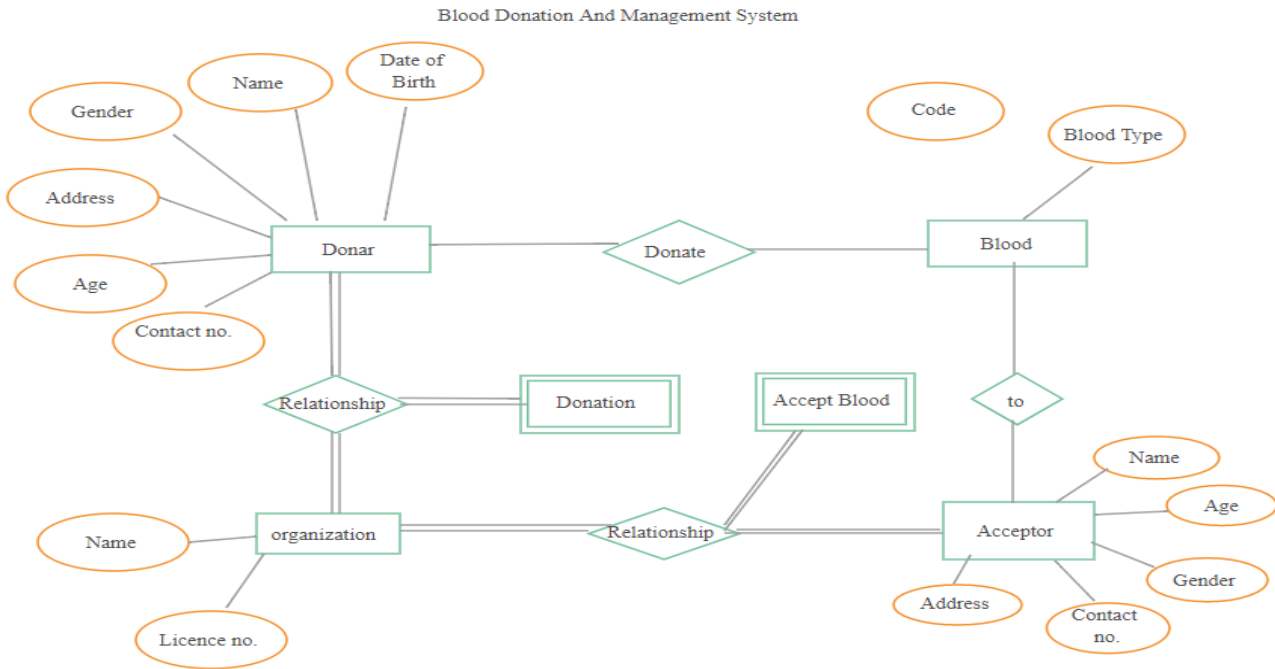
# 8. SYSTEM ARCHITECTURE

9. DATABASE STRUCTURE

Modules:

a. **ADMIN: -**
   • Manage Registration for user

   • Manage Blood bank information like (update, delete)

   • Manage Donor Request for Donor

   • Manage patient Request for needy people

   • Manage Inquiry form for Appropriate Reply

   • Manage feedback for Appropriate Reply

   • Blood bank information view/update

   • View Donor information

   • Manage Patient Blood Request.

b. **BLOOD BANK: -**

   • Blood bank information view/update

   • View Donor information

   • Manage Patient Blood Request.

c. **DONOR: -**
   • Manage Donor information(profile)

   • Add new Donation for Blood

d. **PATIENT:**

   • Manage patient information(profile)

   • Give the Request for the patient for blood

10. USE CASE DIAGRAM
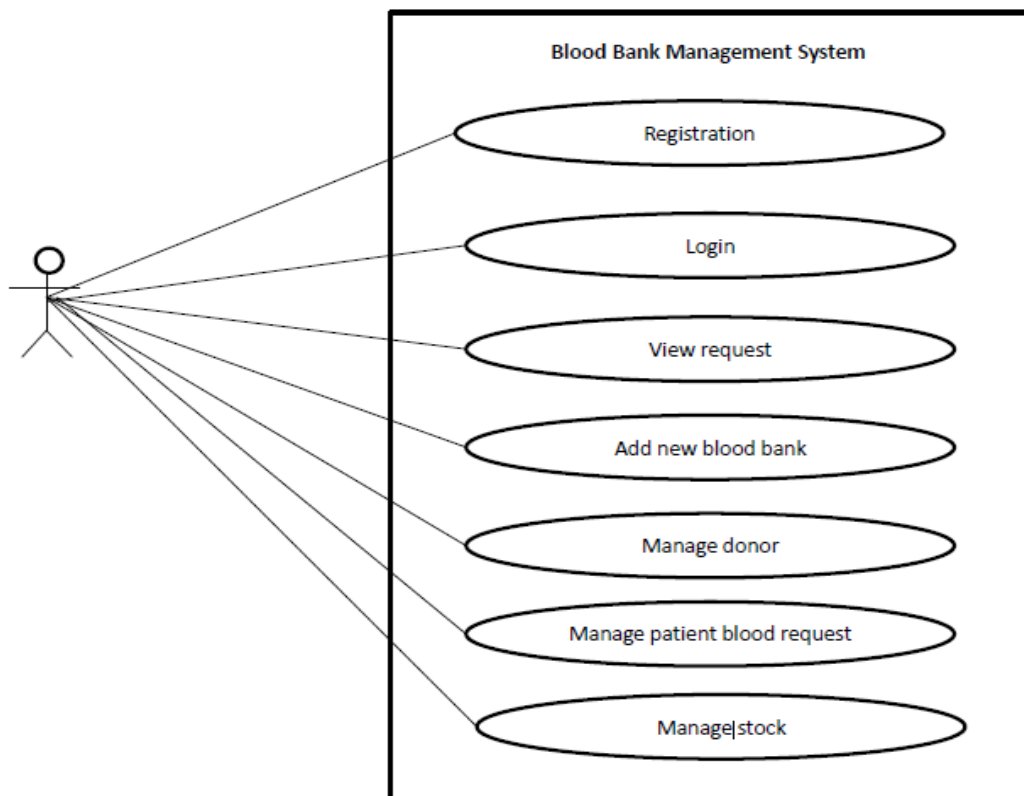
Feasibility study: -

A feasibility study is a test of a system proposal according to its workability impact on the organization, ability to meet user needs and effective use of resources. The objective of a feasibility study is not to solve a problem but to acquire a sense of its scope. During the study, the problem definition is crystallized and the aspects of the problem to be included in the system are determined. After the initial investigation of the system that helped to have an in-depth study of the existing system, understanding its strength and weaknesses and the requirements for the new proposed system.

A feasibility study was done in two phases documented below-

Economic feasibility: -

Economic feasibility is the most frequently used method for evaluating the effectiveness of the candidate system. More commonly known as cost\benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with the costs. If benefits outweigh the costs, then the decision is made to design and implement the system. A cost\benefit analysis was done for the proposed system to evaluate whether it would be economically viable or not**.**

Technical feasibility:

Technical feasibility centers on the existing computer system. (Hardware/software) and to what extent it can support the proposed addition also the organization already has sufficient high-end machines to serve the processing requirements of the proposed system. So there is no need to purchase new software as the organization has necessary software or hardware to support the proposed system.

11. CONCLUSIONS

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 Project "Blood Bank Venture Framework" was one of these opportunities. Overall, the efficiency of the proposal is incomparable and its effectiveness will bring an ease to the life of patients, doctors, and hospitals. Further upgradation of the Blood Bank Venture Framework for various types of organizations with multiple hierarchies can help in reducing paperwork, help achieve error-free tabulation and maintenance of blood. Also, as the blood unit data is stored in the record hence we can reject the blood with any kind of contamination or infections. Secondly, we have an expiry date for all the blood pack units so with the help of the database we can help maintain a proper storage management system.

12. LIMITATION

- Management of returned and unused blood units.
- Determination of Expiry date of the blood units.
- The system fails if the server fails, but the data will remain stored in the database.

This system offers a reliable and easy to access. It can be used as a base for creating and enhancing applications for viewing reports, tracking record for colleges & hospitals. It provides high security and a system that reduces the work and resources required in the traditional process. The proposed system provides the new way of computing and displaying records with responsive and attractive user-interface.

13. ACKNOWLEDGEMENT

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BIOGRAPHIES

Vikrant Kumar Kaushik

Under graduate Student, Computer Science and
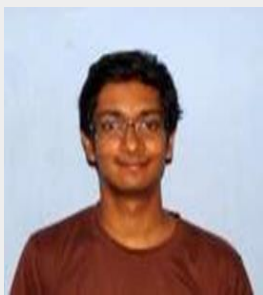Engineering at SRM Institute of Science and Technology Ramapuram Chennai(TN)

Arjun Kumar Gupta

Under graduate Student, Computer Science and
Engineering at SRM Institute of Science and Technology, Ramapuram Chennai(TN)

Ashish Kumar

Under graduate Student, Computer Science and
Engineering at SRM Institute of Science and   Technology, Ramapuram Chennai(TN)

Abhishek Prasad

Under graduate Student, Computer Science and
Engineering at SRM Institute of Science and Technology
Ramapuram Chennai(TN)

Brinda. S

Assistant Professor(O.G), Computer Science and
Engineering at SRM Institute of Science and Technology
Ramapuram Chennai(TN)