

Blood Bank Management System

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ABSTRACT

The purpose of this study was to develop a blood management information system to assist in the management of blood donor records and ease/or control the distribution of blood in various parts of the country basing on the hospital demands. Without quick and timely access to donor records, creating market strategies for blood donation, lobbying and sensitization of blood donors becomes very difficult. The blood management information system offers functionalities to quick access to donor records collected from various parts of the country. It enables monitoring of the results and performance of the blood donation activity such that relevant and measurable objectives of the organization can be checked. It provides to management timely, confidential and secure medical reports that facilitates planning and decision making and hence improved medical service delivery. The reports generated by the system give answers to most of the challenges management faces as far as blood donor records are concerned.

Keyword: - *VU-POINT Scanner, brainstorming, intranet based application, , report generators.*

1.INTRODUCTION: -

Blood Donor Recruitment (BDR) is the process of drawing blood from a voluntary Blood Donor (BD) for future blood transfusion, Wikipedia (2006). In Uganda, blood collection, safety and management is an activity that is carried out by Uganda Red Cross Society (URCS) in partnership with Uganda Blood Transfusion (UBTS). Founded in 1939, URCS is part of the world wide Red Cross Humanitarian Movement whose mission is to mobilize the power of humanity for improving the lives of the vulnerable in Uganda, Muller (2001). URCS fulfills this mission while adhering to the principles of impartiality, neutrality, independence, unity, universality and voluntary service for the Red Cross/Red Crescent Movement. It operates throughout Uganda with 45 branch offices. Besides providing adequate supply of blood for transfusion, URCS is involved in the first aid services, road safety, tracing, disaster mitigation/preparedness, mobilization for routine immunization, HIV homecare, youth empowerment and Community based HealthCare (CBHC). URCS had a manual system using paper cards to recruit BDs, collect/keep blood donor records and disseminate results to BDs who are scattered throughout the country. The paper card system (PCS) used to specifically capture personal data and medical history of the BDs. This information would be used in identifying/locating existing BDs, carrying out predonation counseling and taking blood results. Unauthorized persons however, easily accessed the paper system and hence making it impossible to keep secrecy and confidentiality expected of medical records. The security of the medical records was also not inadequate as any person could easily access them. Lukande (2003), states that such a system is time consuming, prone to errors of entry and analysis resulting from the fatigue of the users. The PCS at URCS had lead to accumulation of physical paper cards due to increasing number of blood donors, a situation that frustrated the system users because of the delays and at times failure to access historical records. The safe blood policy was lacking at URCS because the PCS could not cater for the key attributes of the policy. Gerard (2002), states that the main principles upon which the safe blood policy is based on are the informed consent, confidentiality and secrecy of the BDs. The Ethiopian Red Cross

Society publication, Development in the 1990 states that information from blood donors should be completely confidential and if this is not assured, names of the blood donors should not be recorded at all and/or an alternative record identification should be used. Full implementation of the safe blood policy has called the use of information technology (IT) in providing working solution to the identified challenges. The associated problems with the PCS included delays in accessing historical records, inconsistencies and errors in data entry that stem right from acquisition of data from the blood donors because the exercise is of routine nature and very tedious to the system users. The automation of the system using modern IT has improved the quality of service. Secondly, with the use of IT, now relevant and timely blood donor reports can easily be generated and hence facilitating planning and decision-making. Scolamiero (2000), recommends blood donor services automated information system as a solution to routinely collected, accurate and readily available information in blood transfusion services. It is also important to note that the impact of information technology on organizations is increasing as new technologies evolve and existing ones expand. According to Clifton (1995), nearly all business executives say that information technology is vital to their business and that they use IT extensively. Certainly business executives main concern is planning, coordination and decision-making, therefore, the role of IT in enhancing management of blood donor records is of major importance. In all, the computerization of blood donor PCS at URCS came at the ripe time given the background to the situation. This is more so because the demand for safe blood in Uganda has increased due to soaring increase in total population. Therefore, modern means to manage the PCS using IT had to take route.

Objective:

This is a web application allows you to access the whole information about Blood Bank Management Software, readily scalable and adaptable to meet the complex need of Blood Banks Who are Key Facilitator for the Healthcare Sector, it also supports all the functionalities of Blood Bank.

Problem Definition:

Entering the details about the blood groups, members, addresses etc. And tracking the database is complicated when the details are maintained manually. This makes the maintenance of schedule erroneous.

Existing System:

Limitationstations of the Manual system:

- Ø It is time consuming
- Ø It leads to error prone results
- Ø It consumes lot of manpower to better results
- Ø It lacks of data security
- Ø Retrieval of data takes lot of time
- Ø Percentage of accuracy is less
- Ø Reports take time to produce

Proposed System:

This system is used for maintain whole information about campus.

In this project mainly 3 modules are there.

- Ø Admin
- Ø Donors
- Ø Acceptors

Admin: This module focuses on the both donors & acceptors. Each member in a donor & acceptor is given a user id and password, which identifies him uniquely. The member is given a login form. he enters the login details user id and password. .. The options given to

- Change Password
- Maintain donor details
- Maintain acceptor details
- Update donor details
- Update acceptor details
- Logout

Donor: Each member in a Donor is given a user id and password, which identifies him uniquely. The member is given a login form. he enters the login details user id and password. .. The options given to a each member in a staff are

- Change password
- Find a Blood group.
- Why donate blood
- Logout

Acceptor: Students. In this you can store the information about Acceptors.

- Change password
- Find a blood group.
- Who needs blood
- Logout

System Requirements:

Operating System : Windows XP or Higher
 IDE : VisualStudio.NET 2005/2008
 Front End : ASP.NET
 Language : C#.NET
 Database : Sqlserver 2000/ 2005

Hardware Requirements:

- Intel P4 1.5GHz or above
- 512MB RAM
- 80GB HDD Minimum

SYSTEM ANALYSIS

Preliminary Investigation:

First in the system development process is preliminary Investigation. Preliminary Investigation is conducted in the following phases.

- Project clarification
- Feasibility study
- Project appraisal

Project clarification is the process of selecting a project request for further study. When a system development or modification request is made, the first systems activity, the preliminary investigation, begins the activity has three parts: Request clarification, feasibility study and project appraisal. Many request from employees and users in organization are not clearly stated.

Therefore before any systems investigation can be considered, the project request must be examined to determine precisely what the originator wants. This is called Request clarification.

As important outcome of the preliminary investigation is the determination that the system request is feasible.

Feasibility Study:

The feasibility study is performed to determine whether the proposed system is viable considering the Technical, Operational and Economical factors. After going through feasibility study we can have a clear-cut view of the system's benefits and drawbacks.

Technical Feasibility:

The proposed system is developed using Active Server Page, VB Script and HTML as front-end tool and Oracle 8 as the back end. The proposed system needs a Personal Web Server to serve the requests submitted by the users. The Web browser is used to view the web page that is available within the Windows operating system itself. The proposed system will run under Win9x, NT, and win2000 environment. As Windows is very user friendly and GUI OS it is very easy to use. All the required hardware and software are readily available in the market. Hence the system is technically feasible.

Operational Feasibility:

The proposed system is operationally feasible because of the following reasons.

- § The customer is benefited more as most of his time is saved. The customer is serviced at his place of work.
- § The cost of the proposed system is almost negligible when compared to the benefits gained.

Economical Feasibility:

As the necessary hardware and software are available in the market at a low cost, the initial investment is the only cost incurred and does not need any further enhancements. Hence it is economically feasible. The system is feasible in all respects and hence it encourages taking up the system design.

Gathering Information:

The analysis through collection of data plays the wider role in the analysis of the system. So the data is collected at different levels of management to keep track of full information of the system.

The collection of data is done from

- Top Level Management
- Middle Level Management
- Low Level Management

Different methods used to collect the data:

CONCLUSION

This project has given me an ample opportunity to design, code, test and implements an application. This has helped in putting into practice of various Software Engineering principles and Database Management concepts like maintaining integrity and consistency of data. Further, this has helped me to learn more about ORACLE 8, ASP 2.0, HTML, VB Script, Adobe Photoshop 7.0 and Personal Web Server.

I thank my guide for his invaluable contribution in guiding me through out the project. I also thank my parents and friends who have supported and motivated me to complete this project successfully.

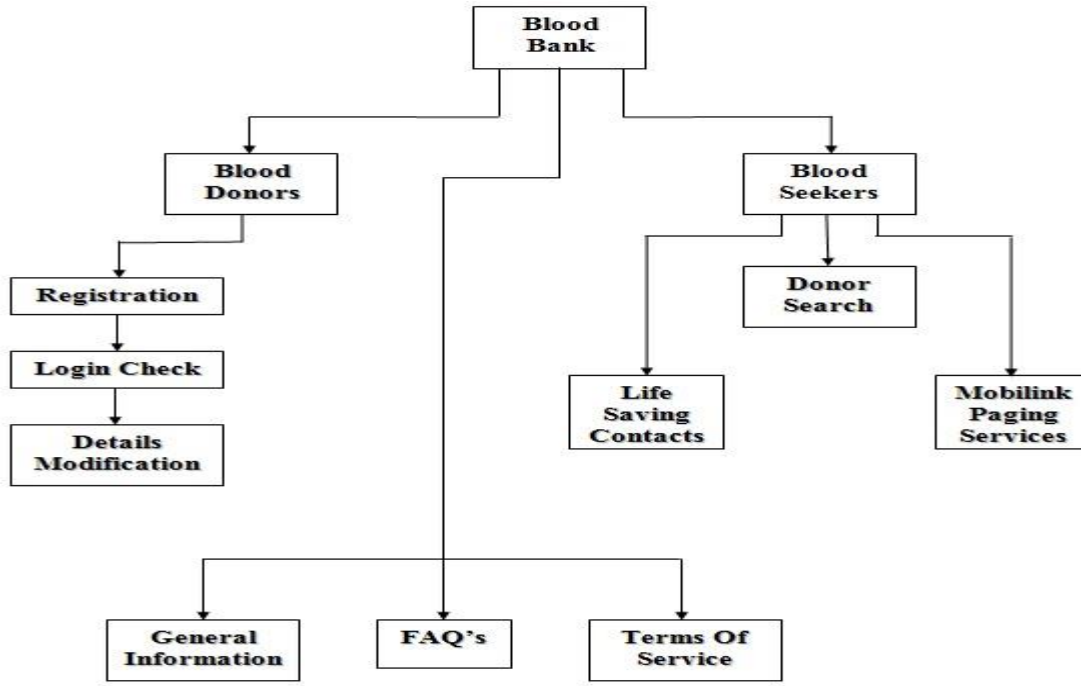
Extensibility:

The other features, which the Blood bank services provide, can also be incorporated into this Blood Bank. The Encryption standards can also be used to make the transactions more secure. The Socket Secure Layer protocol can also used in implementing the system, which gives highest security in the Internet.

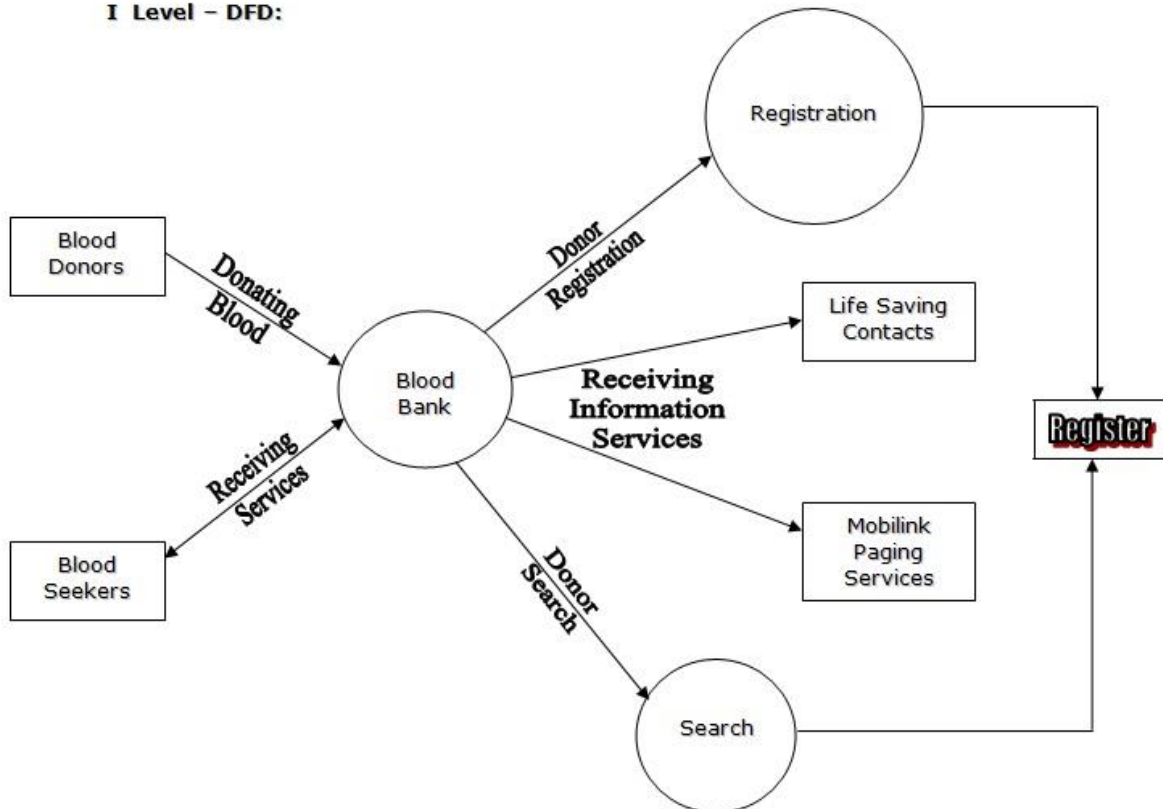
Future Enhancement:

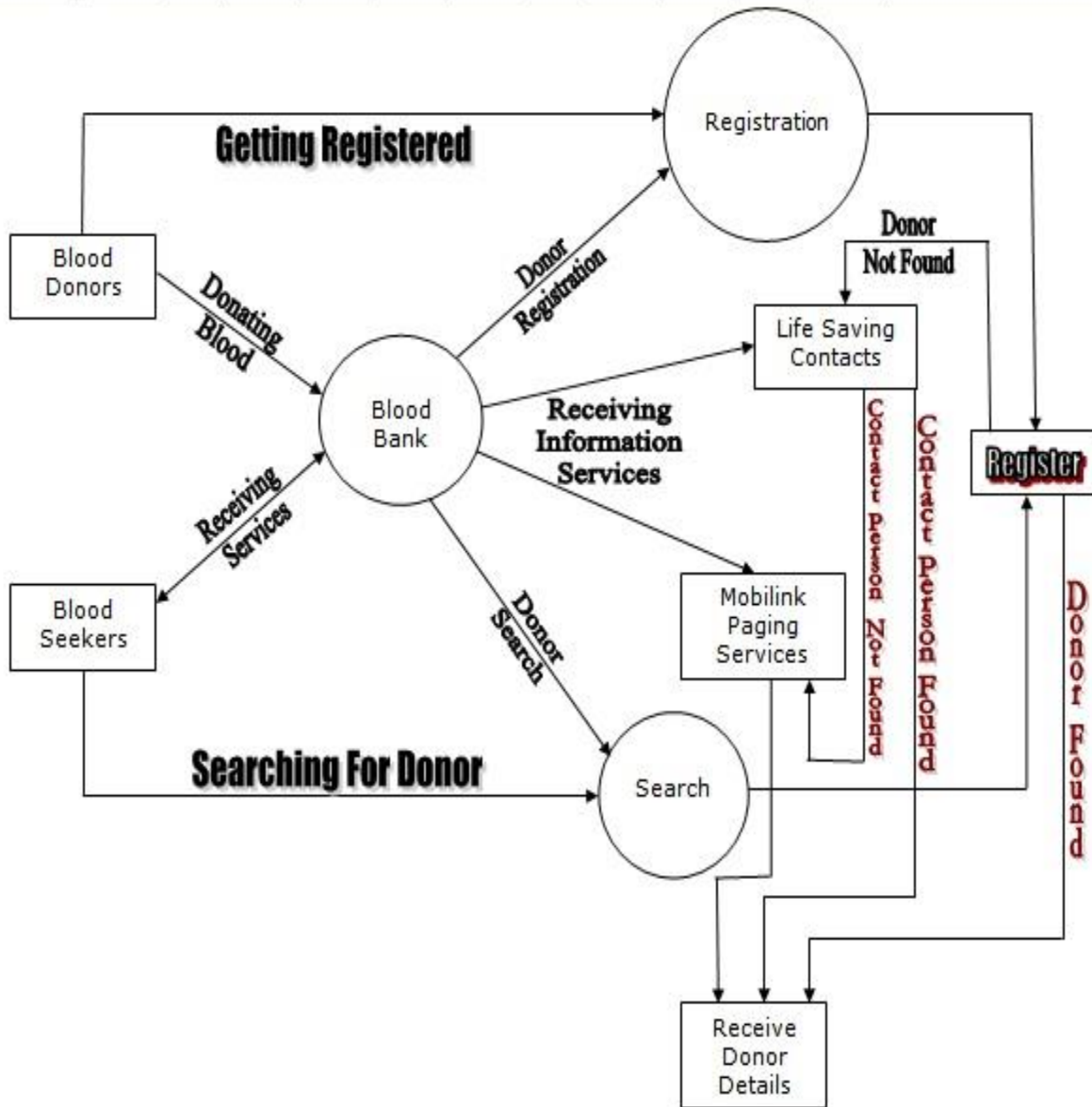
As there was a little number of contact person's information given, some people may face difficulty in getting blood fast. So i like to gather more information regarding the contact persons in other cities as well as villages and will provide much more services for the people and help everyone with humanity.

Diagram:



I Level - DFD:





6. REFERENCES

- 1. TripAdvisor
- 2. Google Maps

BIOGRAPHIES

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