AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

REPORT COVER PAGE

Report Title:	**Online based computerized and automated Blood Bank Management system**			
Course Title:	Software requirement and engineering			
Course Code:	CSC4160		Section:	E
Semester:	Summer	2021-22	Course Teacher:	DR. MD. ABDULLAH - AL - JUBAIR

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Faculty use only		
FACULTYCOMMENTS	**Marks Obtained**	
	Total Marks	

Title: Online based computerized and automated Blood Bank Management system

Purpose of the project

In our "Online based computerized and automated Blood Bank Management system will help the people to get blood in emergency time. This is fully automated based system, where anyone can get blood in a short period of time blood. As manual collection is a lengthy process. We have developed an apps and automated messaging system which will solve the many problems.

Problem Statement

The population of the world is multiplying with each coming year and so are the diseases and health issues. With an increase in the population there is an increase in the need of blood. The growing population of the world results in a lot of potential blood donors. But despite this not more than 10% of the total world population participates in blood donation. With the growing population and the advancement in medical science the demand for blood has also increased. Due to the lack of communication between the blood donors and the blood recipients, most of the patients in need of blood do not get blood on time and hence lose their lives. There is a dire need of synchronization between the blood donors and hospitals and the blood banks. This improper management of blood leads to wastage of the available blood inventory. Improper communication and synchronization between the blood banks and hospitals leads to wastage of the blood available. These problems can be dealt with by automating the existing manual blood bank management system. A high-end, efficient, highly available and scalable system has to be developed to bridge the gap between the donors and the recipients and to reduce the efforts required to search for blood donors.

The proposed system (Blood Bank Management System) is designed to help the Blood Bank administrator to meet the demand of Blood by sending and/or serving the request for Blood as and when required. The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Banks. This Application will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Banks). Our functionalities have been kept simple to be involved with. Those are summarized below in an easy way to understand.

Functional Requirements

1. Access Website: User should be able to access web-application through either an application browser or similar service on the mobile phone or computer. There should not be any limitation to access web-application.

2. User Registration: Given that user has accessed web-application, then the user should be able to register through the web-application. The donor user must provide first name, gender, blood group, location, contact, username and password.

3. New Releases: When a new/update version of the web-application is released, the appearance will be automatically appears when the user access the web-application

.4. User log-in: Given that the user has registered, then the user should be able to login to the web-application. The login information will be stored on the database for future use.

5. Search result in a list view: Search result can be viewed in a list. Each element in the list represents a specific donor. Each element should include first name, gender, blood group, 13

6. Request Blood: User(Hospital) should be able to request for blood at emergency situation, user need to define blood group, location, required date, contact. The order requested will be sent to blood bank and then to the Inventory to check the availability. If available, the requested blood will be sent to the requested donor(Hospital).

7. View Request: The Blood Bank should be able to view received request and then respond to them and can search requests by selecting two options select blood group and provision.

8. Search Blood Bank Stock:Receiving the order from Hospital , the blood stock in the Blood Bank Inventory will be searched to match the requested order. Thus matched blood units will be sent to the Hospital.

9. View Order Details: The Hospital, Blood Bank should be able to view the OrderId, time of the order placed, name of the hospital, location and the address of the hospital. In addition to this an additional feature of tracking the delivery person which includes his location and the checkpoints passed

10. View Delivery Status: The Hospital, Blood Bank should be able to view the status of the delivery time. If the delivery seems to be delayed, then the hospital manager must to able to call the delivery person to get the update on the delivery

Business Requirements

- Time reduce
- The cost reduce
- Information for new location
- Update information for proper use

User Requirements

There are two internal users involved in this system. The user requirements are considered as follows:

An online based computerized system for client quarries

Recipient

To be able to ask ques about and auto reply will generate from our Bot management system. For that This project is originated on an android APP, this will help to find the donors. Blood donor will participate in donor list using APP. Suppose if any need in blood, will get the donor list in this APP. Here in this APP, only 3 Blood group (A+, B+, O+) Data base is established

Donor

1. To be able to view their donation records, including where and when they made donations, and the blood results for each, to learn of their donated blood quality and schedule their next donations.

2. To be able to view and update their personal information, including name, contact address, and phone number, to keep their donor's information record up to date with the blood bank.

3. To be notified of the blood results of their previous donation by e-mail, to know the success of their donation.

System requirement

In implementing the system to ensure that the system performs effectively and efficiently as required, all the program modules for all the specified functionalities has been developed and efficiently coupled to produce a system to effectively locate and managed a blood door and a patients in times of emergencies. The minimum system requirements ensued for the effective implementation of the functionalities of each module of the system includes;

Hardware Requirements

I. CPU of at least 1.60 GHZ processing speed.ii.1GB RAM and hard disk space of at least 250GB.iii.High-resolution color monitor.iv.RAM: At least 1GB of RAMv.USB port enabled.vi. Keyboard Type: PS2 or USB.vii.Mouse Type: PS2 or USB.

Software Requirements

i.Operating system- Certified distribution of Windows, Linux, Macintosh etc.ii.A web Browser such as Google chrome, Firefox, internet explorer etc.iii.MySQL Database System or Maria Database System.iv.WAMP Server, XAMP Server or online server that support apache andMySQL.v.Text Editors (Bracket, Notepad++).

Product vision

1. Support the automated tracking of blood products from the initial ordering of a blood transfusion for a patient, Emergency issue of blood;
2. Management of returned and unused blood units.
3. Routine blood transfusion
4. Emergency issue of blood
5. Users will be able to easily collect blood bank information of a new location, thus reducing the cost of users searching for a blood bank.

Product Scope

This application is built such a way that it suits for all type of blood bank in future.so every

effort is taken to implement this project in this blood bank, on successful implementation in this blood bank, we can target other blood banks in the city.

Main modules of the project:

This project have the following modules, to manage all the requirements of the blood bank.

1. Blood donor details

2. Donor details

3. Recipient details

4. Blood collection details

5. Blood issued details

6. Stock details

7. Camp details

8. Reports

To manage employees in the blood bank it had the following modules:

1. Employee details

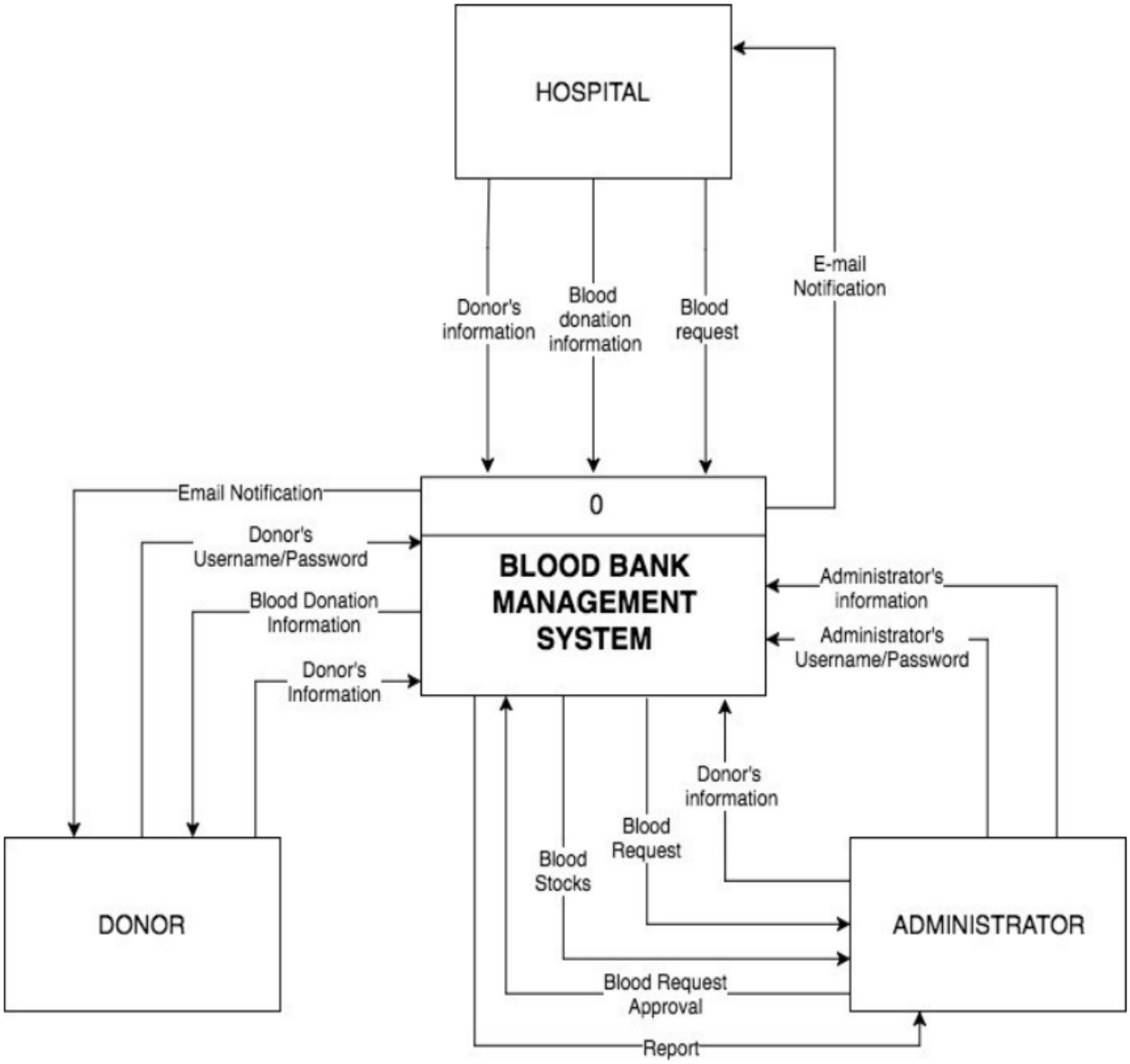
2. Employee attendance details

3. Employee salary generation

4. Employee salary payment

5. Report

Design Specification (CONTEXT Diagrams)



Software requirement specification

Non-Functional Requirements

- **Security**

  - The system use SSL (secured socket layer) in all transactions that include any confidential customer information.
  - The system must automatically log out all customers after a period of inactivity

- **Availability**

  - The system should be available at all times, meaning the user can access it using the application.
  - In case of a hardware failure or database corruption, a replacement page will be shown. 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 24 x 7 availability

- **Performance**

  - The system is interactive, and the delays involved are less.
  - When connecting to the server the delay is based editing on 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 sake of good communication.

- **Reliability**

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

Constraints

1. The Donor and the acceptor are constrained to create an account first to avail the services
2. The internet connection is also a constraint for this web application
3. The web application is also constrained by the database capacity so it works well with a smaller number of donors and hospitals
4. The access to manage the databases are different for different people. The receptionist is given the access to maintain the database of the registered donors and hospitals. The inventory manages is allowed access to update the inventory details and payment of the order placed by the hospitals

Conclusion

Online based computerized system will help the needy people by providing them the donation and make donation easier and more reliable for the people who are willing to donate. Also, our system will help many people to find the blood as soon as possible and here our apps, website and automated messaging system will solve this problem