Cede Blood-Life Saver System

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ABSTRACT

As we know that blood is a saver of all existing lives. There is an expectation that the blood will always be there when it is really needed. Emergency situations, such as accidents, create an immediate and critical need for special blood types. In addition, advances in medicine have also increased the need of blood for various treatments and surgeries. In short, blood is a saver of all existing lives. So in such emergency cases, it is difficult for hospital staff to collect blood in case of shortage of blood without having appropriate resources. Our system solves this problem. This project is developed by three perspective i.e. hospital, blood bank and patient/donor. This project is to build a web-based online blood donation system, named Life Saver System. This system provides an online platform for a quick access to the required donor. Android application is proposed to search the donors who are available nearby during the emergency cases. In this application we are using the GPS technology that will be used for tracing the donors.

Keywords: *Client-Server Architecture, Web based, Patient/Donor, Hospital/Blood Bank, Information System*

I.   INTRODUCTION

Our website provides an easier and efficient way to reduce such scenarios with our project. Cede Blood Life Saver System provides list of donors in your city/area. Use this app in case of emergency. Since almost everyone carries a mobile phone with him/her. It ensures instant location tracking and communication. The Application will provide users an easy way to find the matching blood group in nearby locations.

In today's day to day life, we come across many emergency situations such as accidents which cause bleeding and results in blood loss. Such issues create an immediate, critical need for blood supply as per the requirements of one in need. The software connects all the blood banks which gives us relevant information. The aim of software is to build a solution to the ever growing requirement of blood supply due to accidents and various health problems, the system is developed for accessing the information about various blood banks and hospitals in order to know about their blood stock of various blood groups dynamically. The main objective is to automate the Cede Blood - Life Saver System complete operations of the blood bank. The Blood bank needs to maintain thousands of records. It becomes easy to search for required blood group. This is the application which is to be used by blood banks to advertise donation camps and allow to request blood. For internal works and activities as well as for interaction with public, internet is used. The Android application keeps track of donor's and the web application has the information about blood stock.

II.   LITERATURE SURVEY

Blood Bank Management Information System in India [1] shows the features, advantages and disadvantages provided by existing Web based System for Blood Banks. It describes the details of existing system and gives some idea to improve it.

Benefits of Management Information System in Blood Bank[2] tells the advantage of management system in blood bank. It basically follows management and information system. It describes the benefits of the blood bank management system.

Android Blood Bank[3] shows the details of android application which updates the information of donors where admin accesses every information of blood bank management system. This app gives the list of the blood banks depends on the user's location.

Optimization of Blood Donor Information and Management System[4], they provide an efficient blood donor information and management system based on GPS integrated in android application. The service provided by the system is valuable to health sector where the blood is considered for the safety of the patient.

In MBB: A Life Saving Application[5], in which the proposed system is designed in such a way that all are connected to each other that means in link. The system will help control a blood transfusion service and it will create a database in which data on stocks of blood is maintained including the area of donors to which they belong or in other words their place of living.And then due to such implementations people will be able to see the requirement of blood by the patients. And due to this users will be able to register as donors and thus receive request from their local clients who needs blood to donate blood in cases of need.

III.   SYSTEM ARCHITECHTURE
The system architecture explains how this Blood Bank Management System Works.

If Patient asks for Donor for his/her need. The system send a request to the Database to check the availability of Donor according to the Patient's required Blood Group. Then the system replies to the patient with the available information within certain radius.

Similarly Hospital search into the database for the blood availability according to the require Blood Group. Then the database reply back to the Hospital after gathering information from the Blood Bank.
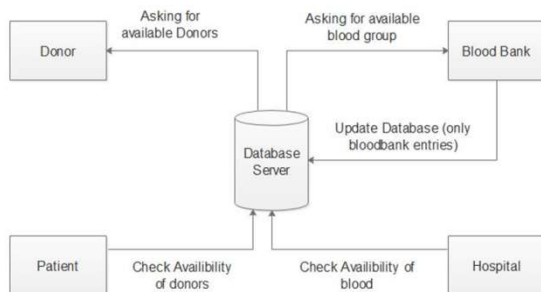
IV.   METHODOLOGY

We use the Iterative model as the software development model which is the activity diagram.

An activity is the process being modeled, such as using the M-Learning application. An action is a step in the overall activity, such as select subject, select topic. The flow of the activity is shown using arrowed lines called edges or paths. The arrowhead on an activity edge shows the direction of flow from one action to the next. A line going into a node is called as an incoming edge, and a line exiting a node is called an outgoing edge.

Fork Node is used to show the parallel or concurrent actions. Fork has single incoming flows and multiple outgoing flows. The join means that all incoming actions must finish before the flow can proceed past the join. Join has multiple incoming flows and single outgoing flow.
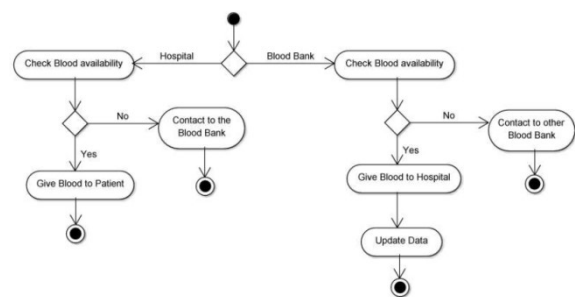

Figure 2: Activity Diagram for Desktop Application(Hospital and Blood Bank)
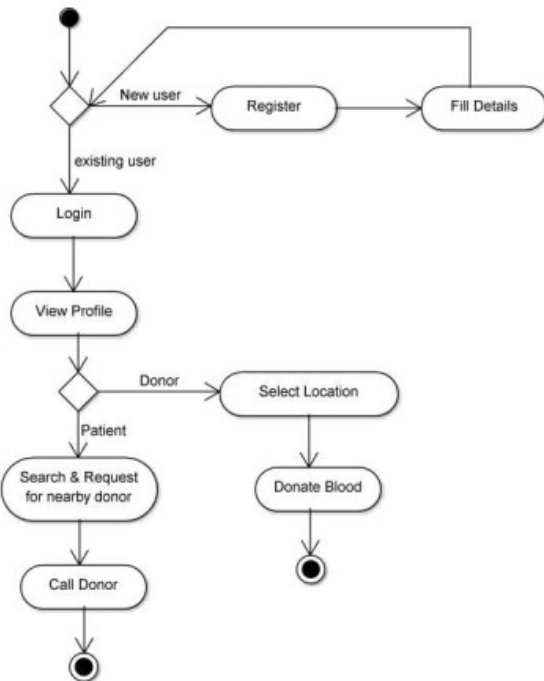

Figure 1: System Architecture

Figure 3: Activity Diagram for Android Application (Patient and Donor)

The class diagram shows the building blocks of any object oriented system. Class diagrams are most useful in illustrating relationships between classes and interfaces.
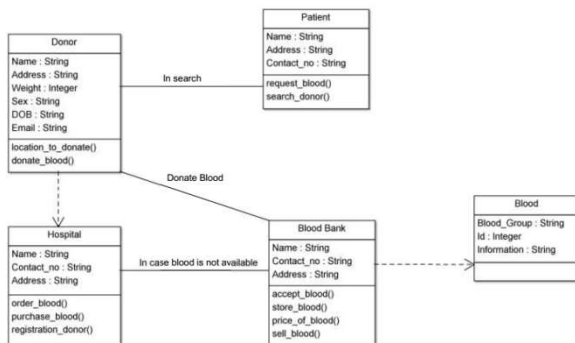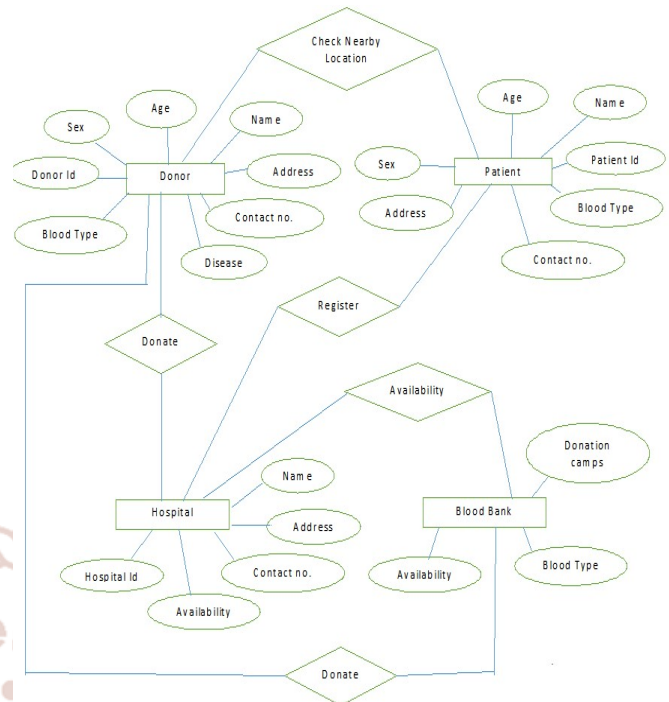

Figure 4: Class Diagram

Figure 5: Entity-Relationship Diagram

V.   ADVANTAGES OF SYSTEM

[1] Blood Donation Camp
[2] Separate User Account can be created.
[3] List of Donors who are eligible for donation on a particular date with contact number.

VII. RESTRICTIONS OF SYSTEM

[1] Internet connectivity required.
[2] Limited power supply
[3] Android application installation.

CONCLUSION

The software makes it easy to access to the blood of various blood groups required by the particular user in need. The user can know about the nearby blood banks depending on its location. This website describes the blood stocks as it is updated by the respective blood banks. The overall basic information which is required for the donor is made available in the website hence making it easy for the user to operate. We have proposed an efficient and reliable software. The service provided by the proposed system is needed and valuable to health sector where a quality of blood is considered for the safety of the patient. The donor will get himself registered through these improved system. In case of emergency requirement the blood donor can place a request. The wireless internet technique enables the flow of data to work more rapidly and conveniently.

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