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Online Blood Bank Using Cloud Computing

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Abstract— As we all know the Working of Blood Bank Management System. A blood bank is a cache or bank of blood or blood components, gathered as a result of blood donation or collection, stored and preserved for later use in blood transfusion. The main aim of this project is to save lives of people by providing blood online using technology. Our project Online Blood Bank system using Cloud Computing is developed so that users can view the information of nearby donors, hospitals, blood banks. This project is developed by three perspectives i.e. hospital, blood bank and patient/donor. We have provided security for authenticated user as new user have to register according to their type of perspective and existing user have to login. While registering, to check whether the donor is giving correct information about his blood group we will ask the donor to upload his/ her license or any government id proof on which blood group is mentioned. This project requires internet connection. We are using android application to find nearby donor and to select the nearby hospital online instantly by tracing its location using GPS. We are also proving an alert system for severe accidents as using that function an ambulance will be sent to your destination without any wastage of time. Notification regarding blood donation camps, health check-up drives etc. in the area will also will sent to the registered users. This application reduces the time to a greater extent that is searching for the required blood through blood banks and hospitals. Thus this application provides the required information in less time and also helps in quicker decision making. It basically bridges the gap between donor and the receiver. It provides better blood management and storage

Keywords— Android, Blood bank, Concept of DBMS, Cloud Computing Global Positioning System, Web Application.

I. INTRODUCTION

It is healthy donating blood. So, we have created an application to simplify the blood donation process. The donor can easily locate where his/her blood group is needed. Those locations can either be entities or individuals that urgently need the donor's blood group. When there is an urgent need for a particular blood group, you can use the app to contact only the people having the required blood group. This system contains different modules to maintain blood and blood donors. Emergency situations, where accidents occur, create an immediate, critical need for specific blood types. In addition to emergency need, advances in medicine have increased the need for blood in many on-going treatments and elective surgeries. Despite increasing necessity of blood, only about 5% of the Indian population donates blood. In our project we propose a new and efficient way to overcome such scenarios. A large number of blood donors are attracted using an Android application. Cloud based services can prove important in emergency blood delivery since they can enable central and immediate access to donors' data and location from anywhere and almost any device. Since almost everyone carries a mobile phone with him, it ensures instant location tracking and communication. Using GPS and we find donors nearer to the location from where the request is generated. Thus the 'Mobile Blood Bank' can prove to be a boon for blood requesters.

The Scope of the project is that in a very short span it provides user with many facilities. It provides an elegant management of blood, list of hospitals, blood banks and donors online. The main purpose of this project is to

interconnect all the blood banks, hospitals, donors into a single network, validation, store various data and information of blood and health of each individual. This system is used to store data over centralized servers which consist of database where the individuals' information cannot be accessed by a third party.

A. Users of the System

- I. Administrator (this should be a general body, could be from central blood bank agency)
- II. Blood Donors
- III. Blood Banks, Hospitals, Clinics, etc.

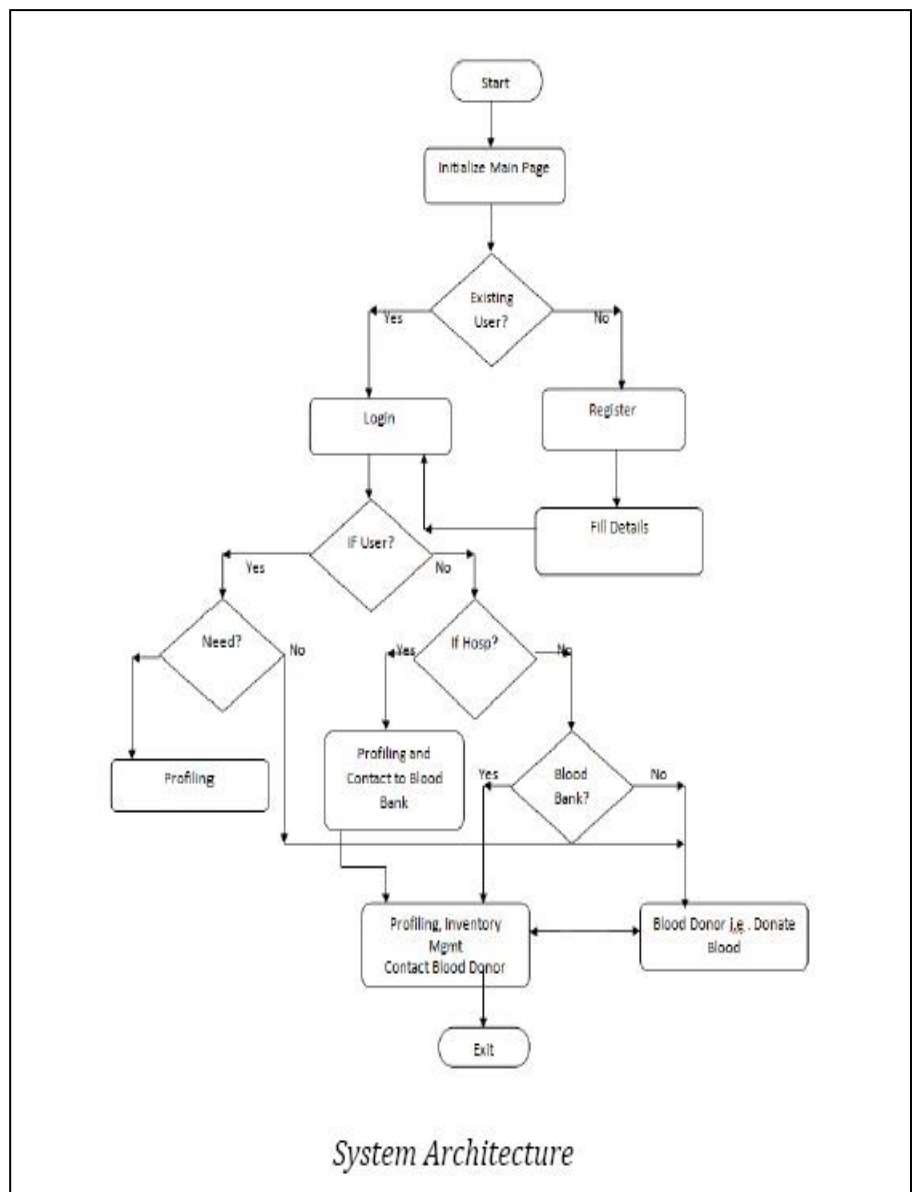
B. Functional Requirements

- Administrator should have access to all details of blood donors
- Blood Banks , hospitals etc could browse for blood donors in their nearby area and also the search result should provide only those donors who have not donated blood in last 3 months
- Blood donors should be asked to give feedback of the health report of donors (on basis of their blood taken), for future consideration after the blood donation is being made by donor.
- No user could access any details of donors without being a member of website. Only hospitals, blood banks etc should be able to see the contact details of donors.
- Blood donor should be allowed to see only the name and region they live in. Also if they need to ask another blood donor for any blood donation help it should be through admin and proper reason for which there should be a form to be filled by donor.

II. PROPOSED SYSTEM

The user has to first download the application. He/She will be provided with two options: Login and sign in. If the person has already registered, then he/she has to login. If not, he/she has to create an account providing basic details like name, address, contact, date of birth, blood group, email id etc. The user is allowed to update his/her information. Once the user registers, he/she can check various blood banks that are located. The user will get various options on screen:

- Blood camps
- Search donors
- Search blood banks
- Request for blood
- Nearby hospital
- View notification
- Emergency contact details



The user can select any of the option and according to the selected option he/she will get the information. The user can also get the exact path from his/her location to blood bank or hospital by using Global Positioning System (GPS).

The details of the blood banks, hospitals etc will be saved in database and only the admin will have access to database. Private and confidential data of the users can only be viewed by administrator. This system promises very less paperwork and also provides help to blood recipient, blood banks and donors also. With help of our application the user will not have to go to the blood bank and ask for the required blood he/she can directly check from our application.

III. EXISTING SYSTEM

As per the information obtained from BLOOD BANK and HOSPITAL we had understood the following working system of blood bank. There is growing need of blood but one cannot produce blood in laboratory. Blood bank and hospital are depending on the blood donated by the donors. So to promote donors to donate blood. Blood bank and hospital organize blood donation Camps or one can call donors by calling them by the Phone number provided by the donor in the form. The existing system is the manual system in which the donors first visit the hospital and checks for following factors.

- Filling up the form
- Donating blood
- Searching record

IV. SCOPE OF PROJECT

The Scope of the project is that in a very short span it provides user with many facilities. It provides an elegant management of blood, list of hospitals, blood banks and donors online. The main purpose of this project is to interconnect all the blood banks, hospitals, donors into a single network, validation, store various data and information of blood and health of each individual. This system is used to store data over a centralized server which consists of database where the individual information cannot be accessed by a third party. It also provides effective:

- Blood donation management
- Blood safety
- Blood and blood component production.
- Blood and blood component storage and distribution
- Online platform for health checkup
- Eradicate Corruption In Blood Distribution

V. APPLICATIONS

- All the process of submission of registration form is quite simple.
- Department can contain information regarding various blood groups.
- People can get registration by sitting at home.
- Donors can view the blood donation camp organising at the different places.
- Donor can also check his blood group medical story whether it is healthy or unhealthy.
- Seeker can get the information of the particular blood group accessible in the blood bank.
- Seeker can get the blood units according to his requirement from the blood bank.
- The probability of error should be minima
- Blood storage and effective blood management.
- Healthy blood will be provided.

VI. REQUIREMENT ANALYSIS

HARDWARE REQUIREMENTS:

- 1 GB RAM.
- 200 GB HDD
- Intel 1.66 GHz Processor Pentium 4

SOFTWARE REQUIREMENTS:

- Windows XP, Windows 7,8
- Visual Studio 2010

- ANDROID Studio
- Windows Operating System

CONCLUSIONS

INITIALLY MOBILE PHONES WERE DEVELOPED ONLY FOR VOICE COMMUNICATION BUT NOW DAYS THE SCENARIO HAS CHANGED, VOICE COMMUNICATION IS JUST ONE ASPECT OF A MOBILE PHONE. . THERE ARE OTHER ASPECTS WHICH ARE MAJOR FOCUS OF INTEREST. TWO SUCH MAJOR FACTORS ARE WEB BROWSER AND GPS SERVICES. BOTH OF THESE FUNCTIONALITIES ARE ALREADY IMPLEMENTED BUT ARE ONLY IN THE HANDS OF MANUFACTURERS NOT IN THE HANDS OF USERS BECAUSE OF PROPRIETARY ISSUES, THE SYSTEM DOES NOT ALLOW THE USER TO ACCESS THE MOBILE HARDWARE DIRECTLY. . BUT NOW, AFTER THE RELEASE OF ANDROID BASED OPEN SOURCE MOBILE PHONE A USER CAN ACCESS THE HARDWARE DIRECTLY AND DESIGN CUSTOMIZED NATIVE APPLICATIONS TO DEVELOP WEB AND GPS ENABLED SERVICES AND CAN PROGRAM OTHER HARDWARE PROGRAMS LIKE CAMERA ETC.

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