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Design and implementation of blood bank system using web services in cloud environment

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Abstract

A large number of blood donors are attracted using an android application. Blood is a saver of all existing lives in case of emergency needs. The task of blood bank is to receive blood from various donors, to monitor the blood groups database and to send the required blood during the need to the hospital in case of emergencies. The problem is not insufficient number of donors, but finding a willing donor at the right time. We want to build a network of people who can help each other during an emergency. This application timely updates the information regarding the donors where the administrator accesses the whole information about blood bank management system. Donor will be prompted to enter an individual's details, like name, phone number, and blood group. In the urgent time of a blood requirement, you can quickly check for blood banks or hospitals matching a particular or related blood group and reach out to them through the App. Blood bank App provides list of blood banks in your area.

Keywords: Blood bank, Blood donor, Android, Administrator.

1. Introduction

Blood is one of the most critical components of human life and it is really referred to as stream life. There are number circumstances where critical need of blood comes. At this critical times, the online blood bank system with has an automatically call routing office will be remarkable guide. We here intend to achieve this through the usage of asterisk gear which performs the call routing function. The need for the blood is necessary for treatments in medical centres and other hospitals especially during emergencies. At first aim of a blood bank system is to receive the blood from the various donors.

Alone et al [1] the blood bank system is mobile services ad web services use the database from cloud. The blood bank officer can manage the data that is processing the available data. This process is called as management information system(MIS).this management information system consist of input, output, further control as well as data processing for useful data. The blood bank managers use the available information system.

Jenipha, et al [2]This existing system will be the solution for the issues such as wrong data of donors, misuse by outside parties and updating the donated blood by the donor which replace the older framework. Hamlin, et al [3] The proposed system is a web services based on android application which helps us to reduce he human errors which are done in the current system. BalaSenthilMurugan et al [4]The necessity of blood .there is no substitute for human blood. At normal every second someone needs blood. Everyday blood is need in medical clinics and emergency treatment facilities for patients with cancer and other diseases for organ transplant as well as save the all lives accidents.

Adsul et al [5]The requester who describes on the person who requires the blood from the blood bank because of disease, surgery as well as accident etc…The donor the person who is health body to donate the blood any for saving the patient life is the donors. Waleka et al [6] the person having body weight, haemoglobin as well as chronic disease becomes the donor. The blood bank system can be defines as part of the blood bank is blood is stored, tested, secured as well as to reduce the risk at the time of management. Arif et al [7] the systems which consist of an android application or web services by the user can access the system.

Akter et al[8]All the information of the hospital, blood donor is stored in database. Blood bank App provides list of blood banks in your area. A large number of blood donors are attracted using an Android application. . In the urgent time of a blood requirement, you can quickly check for blood banks or hospitals matching a particular or related blood group and reach out to them through the App. Dong et al [9] in the case of clinical and health industry, more than information processing effectiveness, the barcode technology is common for it's a tracking, managing as well as ability of categorizing.

Spyropoulos et al [10] in this paper implemented of a worldwide information system with integrated by web services. Meza et al [11] in this paper proposed an upgrade of an existing work system with the framework for telemedicine in the transfusion service. Kim et al [12] in this paper presents a management system and blood monitoring system for use in hospital management. Singh et al [13] in the urgent time of a blood requirement, you can quickly check for blood banks or hospitals matching a particular or related blood group and reach out to them through the App. Santhanam et al [14] in this model requires to be customize to demographic and geographic as well as specific attributes. It is a real time system. Turhan et al [15]in this work implemented by blood can only be supplied by live donors.it is a most responsible for millions of people each year around the world.

2. Proposed design:

The overall workflow of blood bank system based on web services stored in a cloud environment using android application is shown in Figure 1. BBS consists of four modules

admin, accepter, doctor, and patient. These modules are explained in the following sections. In this work explained as response and notification from blood bank for blood. The middle blood bank has a database to calculate of blood packs for particular blood groups. The blood shortage issues the blood bank system, the count has the low, the system automatically will notify the responsible authorities and a blood bank camp can be maintained for the billing.the middle level of blood bank system it can be also similar work, just there will be any problem in central blood bank will be informed and the blood can be made if available.

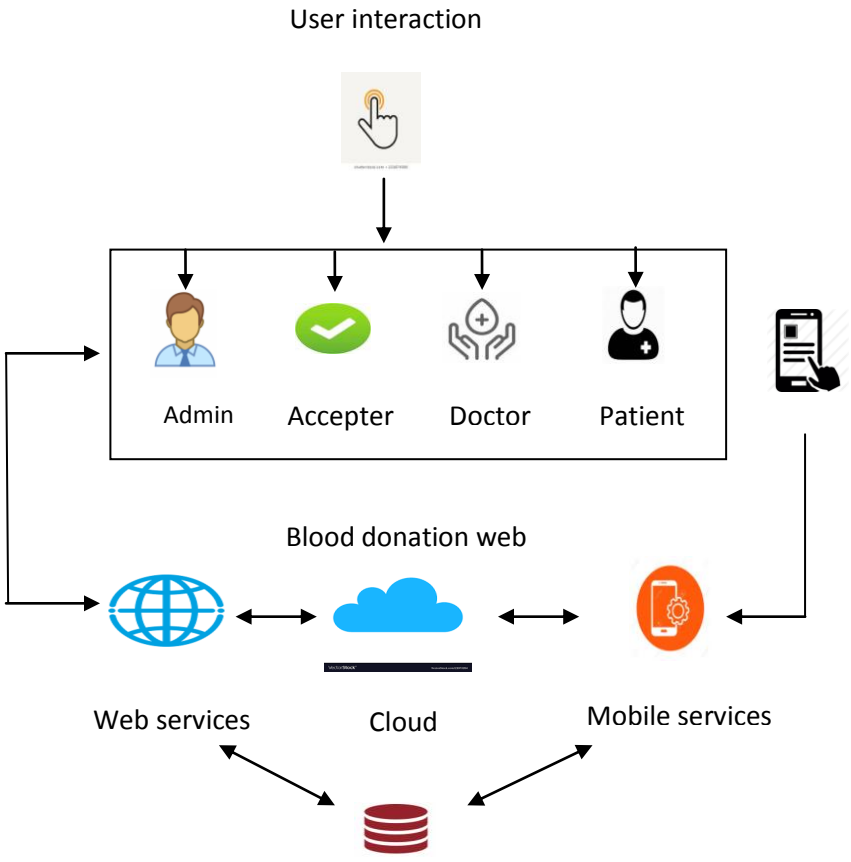

Fig 1.w bank system

2.1 User model:

In this module, if the user already has the account, log in to the system by using username and password and enter the blood bank details.if the user can login to the framework as requester,at the point he can directly ask for the required blood group.after receiving the request

to contol moves to the database stored in a cloud environment and after to check wheather the required blood group is availble or not.if the particular blood group is available then the information has sent to the user as soon as possible.the user in the framework of the system is the patient and accepter.the information of donors is accessed by accepter and patient,at the same time the patient information are required and needed.all the informtion has the checked properly.

2.2 Admin model:

Admin module is the most important of the blood bank system.at any time the admin login to the system the admin allowed all the access correct to the database stored in a cloud.Admin has the one of the responsible person for handling the efficient working of the system.in case any problem happens the admin must try to solve the problem and make system work again.

2.3 Web services:

Web services have been used to search out from the blood donors by website. the information of donors is accessed by accepter and patient,at the same time the patient information are required and needed.all the informtion has the checked properly.this website follows the database up to date.it is user friendly manner.it is the most responsibility of this model.

2.4 Mobile services:

Mobile services have been used to search the blood donors through the mobile phones.this module helps to manage and control moblie blood bank management or functions as well as marketing data collector.it is web based function its works on anywhere and anytime concept to helps the capture data from the different locations.

2.5 Database:

The database which has the cloud environment.all the information has the used by mobile services and web services.regular updation of blood donor as well as accepter is needed.

3. Result and discussion:

Nowadays we are assessing our project. We are working with a international blood donor organization for testing our framework. The proposed system can be used to reduce the time between patient and donors. The framework consists of android application, GSM modem as well as raspberry pi. In this direct communication between donors and recipient by SMS. In case of emergency this system results shows different screen of the android application that needs the

blood bank system. The donor was donating a blood for storage or another centre for transfusion is an unknown recipient

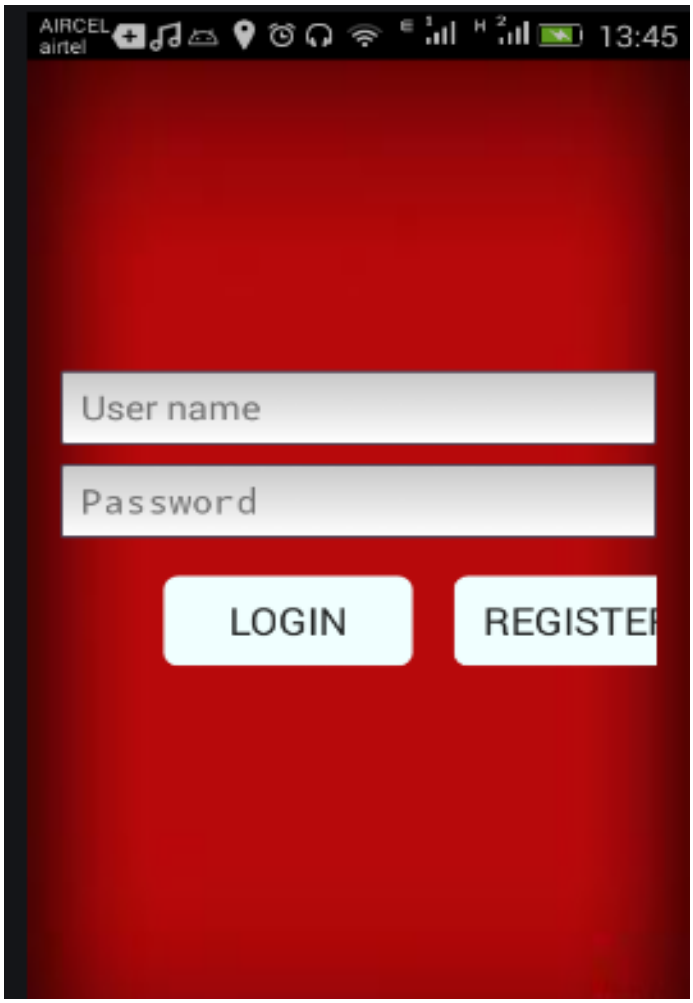

Fig 2.Home page

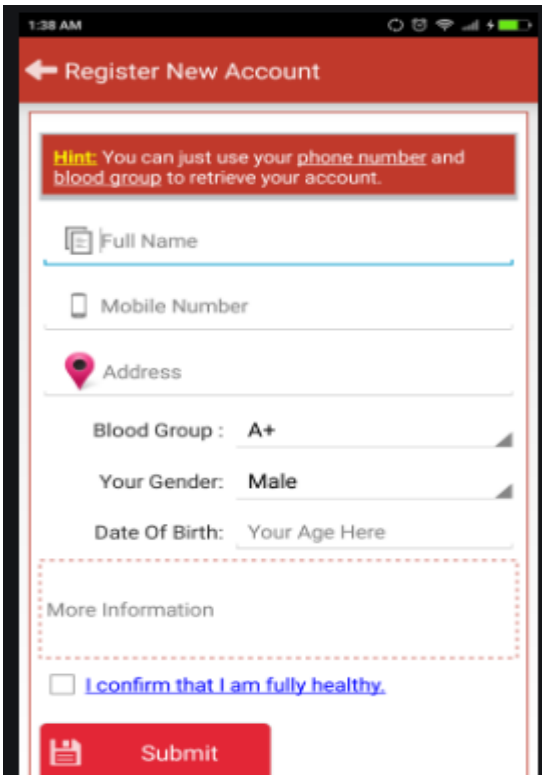

Fig 3.Registration page

Task of blood bank is to receive blood from various donors, to monitor the blood groups database and to send the required blood during the need to the hospital in case of emergencies. The problem is not insufficient number of donors, but finding a willing donor at the right time. We want to build a network of people who can help each other during an emergency. This application timely updates the information regarding the donors where the administrator accesses the whole information about blood bank management system. The latest cloud computing technology will be used in this frame work. Database will be created and managed using cloud database. This paper presented as the consistent online cloud blood bank system. Information system and latest technology skills are a very important in blood bank system and its services. When there is a very important requirement for blood, it may not possible for human to connect to the internet to saw the online blood bank systems that are already in system. If it is possible means the call will immediately connected to the donors.

4. Conclusion

This project aims to create a cloud application known as web application for android mobiles. The overall purpose of this project is to develop a computer application that will link all the donors. The system will help control create a database and blood transfusion service to hold

data on stocks of blood in anywhere at any time. Also people will be able to see which patient need to blood supplies through the website. They will be able to register as donors as well as therefore receive a SMS from their local area clients who needs blood will donate the blood in cases if they are needed. The website will help them develop the public awareness with visitors of the hospitals its need for blood in order to supply the proper donors.

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