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Blood at one touch

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Abstract— We know that blood is very important for human life. In real world everything is produced artificially but not blood. When blood is required we need a donor to give blood. In this paper we are presenting blood donation system. In that we provide service to the blood bank, hospital and users (Donor's and Acceptor's). In this blood bank project we are using latest technology like Spring and Hibernate to improves the performance of the system. We are also use the GPS system to show the route to user of nearest hospitals and blood banks. In our system blood bank can organize the blood camp to fill blood stock. Our system sends notification to users when blood camp is organize. We are also providing android app to user to search nearest hospitals and blood banks as per the blood group.

Keywords- Blood bank, Spring, Hibernate, GPS, Donor's, Acceptor's, Blood donation camp.

INTRODUCTION

Blood is a saver of all existing lives in case of emergency needs. During the blood transfusion process, the acceptor receiving blood should be considered before donating the blood. The blood donor information should be checked before displaying their details on the website. Technopedia is nothing but web service with a mobile application. An availability of blood is major issue in today's life. The reason behind that is number of accidents as well as major diseases. The possibility of finding blood in nearest blood bank is less. At that time patient may face severe problem. The need for the blood is important for treating in medical field. For every second someone needs blood to save their life. 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. In developing countries, especially like India, the blood resource lacks in quantity which is a barrier to others life. The Southern regions of Asia are weak in regulation of BTS and some times transferring the real time data are difficult.

There are many shortcomings like decentralized nature of donor and required blood is needed at serious times. Manually is difficult in the current existing system and tracking the database for particular blood group is complicated. The aim of serving an efficient quality of blood to the patient. The last minute update of information are done in bidirectional way. So the information regarding the Blood Transfusion Services(BTS) is explained as entering the details about the blood groups, members, contact details, etc. and finding the donor with GIS. The update about the information after the donation of the blood by a donor is not entered in the system. The online blood bank management system helps to maintain the database and quality of blood.

LITERATURE SURVEY

Blood is a saver of all existing lives in case of emergency needs. During the blood transfusion process, the acceptor receiving blood should be considered before donating the blood. The blood donor information should be checked before displaying their details on the website. In this paper, also the proposed work has a Push technology with security, to protect the contact details of the donors in web application where it can be misused by third parties. It also maintains the amount of each available blood groups, if the stock of a particular blood group is lower than the required amount then the proposed method notifies the donor to donate blood. In addition to web application, an android mobile application is proposed to search the donors who are available nearby during the emergency cases such as accidents. [1]. The growing demand in the blood bank sector makes it necessary to exploit the whole potential of stored data efficiently. Data mining can contribute with important benefits to the blood bank sector; it can be a fundamental tool to analyze the data gathered by blood banks through their information systems. In this paper an attempt has been made to classify and predict the number of blood donors according to their age and blood group. J48 algorithm and Weka tool have been used for the complete research work [2]. This paper focuses on the data mining and the current trends associated with it. It presents an overview of data mining system and clarifies how data mining and knowledge discovery in databases are related both to each other and to related fields. Data Mining is a technology used to describe knowledge discovery and to search for significant relationships such as patterns, association and changes among variables in databases. This enables users to search, collect and donate blood to the patients who are

waiting for the last drop of the blood and are nearby to death. We have also tried to identify the research area in data mining where further work can be continued [3]. Google Android platform for mobile devices has quickly developed into a serious open source alternative. We explored the Android Operating System (OS) and software development environment and evaluated several of its capabilities by constructing a working application. This application collected speed and location information from the

Global Positioning System (GPS) receiver, used the Google Maps Application Programming Interface (API) to determine the location of nearby hospitals, and gives message to hospitals and relatives, if a person need a help. The platform proved capable of supporting a melding of different services, and we believe such smart phones have broad applicability to public safety problems [4].

EXISTING SYSTEM

The recruitment of blood donor when compared with other countries is very less in overall blood donating percentage annually. Besides this recruitment, the screening of donor and the management system is not well maintained. The details of the information of donors are given for the usage of the users for contacting them when in need of blood in case of any emergency. The problem which currently exists in the medical field is that blood is needed immediately for an injured person or for any major operation. It is not easily available even though blood banks are present. There are some websites present for donating blood were the phone numbers of the donors are present which are not reliable since they don't get often updated. At present there are no proper websites.

PROPOSED SYSTEM

1. First of all the users (Acceptors/Donors), Blood Banks and Hospitals are registered with our System.
2. Blood Bank Maintain their stock details by updating its database every time.
3. Acceptor search for required blood component (Platelets, RBC's, WBC's etc.) for respected Blood group. Our system tracks the GPS location of that acceptor and displays the nearest Blood bank details to that acceptor.
4. Acceptor selects any of the one option by clicking. After clicking details of that blood bank i.e., Address, contact no., Availability of blood, and also Show path.
5. If user clicks on Show path our system will show the path from acceptor location to that blood Bank.
6. Our system also notifies the respected donors if any blood campaign is organized.
7. Our system sets a minimum threshold for all blood banks if any blood bank stock touches to that threshold our system sends warning message to that blood bank.
8. Our system also maintains track of donor's blood donation details.
9. If any donor wants to donate blood before 3 months of previous blood donation system shows a Warning message to donor.

SYSTEM ARCHITECTURE

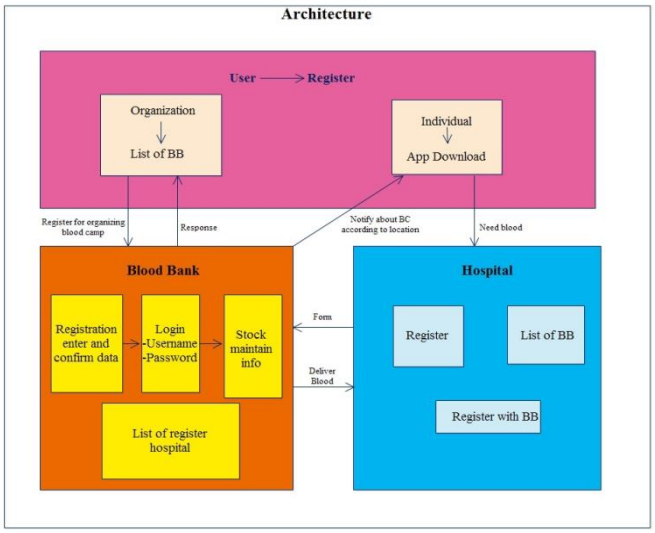

Fig. 1: System Architecture

Fig.1 gives the system details along with various blocks. System architecture is explained below:

1) User Module: - In this user module user has to registers in this system. They have to fill personal information like name, address, blood type, etc. From the system user can download the mobile application. Link for mobile application is provided by the system. In user module our system shows nearby blood banks, hospitals and organizational camp to user. It will also provide GPS location. It also shows user shortest route to hospital and blood bank.

2) Blood Bank Module: - In this blood bank module blood bank has to registers in this system. They have to fill their blood bank information like blood bank name, it's location, address, contact number, blood bank registration id, etc. Blood bank has to maintain it's blood stock. Blood bank can tie-up with hospital**.** Blood bank can accept or reject blood request.

Blood bank can see list of register hospital. Blood bank can organize blood camp and send notification to users.

3) Hospital Module: - In this hospital module hospital has to registers in this system. They have to fill their hospital information like hospital name, it's location, address, contact number, hospital registration id, etc. Hospital should be tie-up with blood banks. Hospital can send the blood request to blood bank. Hospital can send request to blood bank to organize blood camp.

VI. CONCLUSIONS

In this system an efficient and reliable blood donor information and management system based on GIS integrated in android mobile application. The service provided by the system is needed and valuable to health sector where a quality of the blood is considered for the safety of the patient through a systematic process by the blood management system. This system will be the solution for the problems such as wrong information of donors, misuse by third parties and updating the donated blood by the donor

which replaces the older systems. This system is a web based android application helps us to reduce the human mistakes which are done in the existing system. The wireless internet technique enables the flow of data to work more rapidly and conveniently. This is integrated framework which has a cloud-based application on mobile devices.

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