BLOOD BANK MANAGEMENT SYSTEM*

BY

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ABSTRACT

This study outlines a high-tech system for bridging the gap between blood donors and individuals in need of blood. The Blood Bank Management System programme provides a way to connect blood banks and hospitals via the Internet. It's a web service that allows registered hospitals to check for requested blood availability and submit blood requests to the nearest blood bank or donor who matches the blood demand. Blood can then be ordered as needed via the internet. If a blood bank is out of stock, it can seek blood from another blood bank. People who want to donate blood can use the Blood Bank Management Android App to locate blood banks near them. The blood bank's location can also be found on a map. Only donors, seeking blood banks and hospitals are allowed to use the Android app to find local blood banks, while only requesting blood banks and hospitals are allowed to use it to find local blood banks. The procedure for keeping blood bags obtained at blood donation events necessitates meticulous and methodical attention. Because a blood bag is related to a person's life, it must be handled with caution and meticulously maintained. It is proposed that a Web-based Blood Bank Management System (BBMS) be built to offer the blood bank with a management function for handling the blood bag. A freestanding blood bank system is currently used by only one government hospital in Kuala Terengganu, Malaysia's East Peninsular Coast.

KEYWORDS

Blood Bank Management System, Doner, Hospital.

INTRODUCTION:

With each passing year, the global population expands, as do diseases and health issues.The demand for blood rises in lockstep with population expansion. The number of potential blood donors grows in lockstep with the world's population. Despite this, only approximately 10% of the global population donates blood. As the population has risen and medical research has

* Received 22 September 2021, Accepted 09 October 2021, Published 24 October 2021

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developed, the demand for blood has soared. Due to a lack of communication between blood donors and blood receivers, the majority of patients in need of blood do not receive blood on time, and as a result, they die. The importance of synchronisation among blood donors, hospitals, and blood banks cannot be overstated. This inefficient blood management wastes the available blood supply. Due to a lack of communication and coordination between blood banks and hospitals, blood is squandered. The existing XI manual blood bank administration system can be automated to address these issues. To create a system that connects every blood bank or donor in a chain so that those who are in severe need of blood can receive it. The purpose of constructing such a system is to avoid the turmoil and panic that often arises in emergency situations, allowing the patient's family to remain together rather than scurrying to acquire blood. The Blood Donation Management System is an online and mobile application that keeps track of a blood bank's daily transactions. This programme will establish an e-Information system that will include information about the donor as well as the blood donation organisation. This software allows users to search for donors, patients, doctors, blood bags, and other identifiable characteristics.

EXISTING SYSTEM:

Hospitals and blood banks in India have a pretty tight system in place for getting blood units in an emergency. The hospital will deliver the required amount of blood if it is available. Otherwise, the patient's family will be forced to conduct an unorganised blood search. The existing application system is inefficient and difficult to use. Fast blood updates are not possible due to technological limitations.

PRPOSED SYSTEM:

Our application is being created in order to substantially reduce the amount of time spent seeking for the right donor and the volume of blood available. As a result, our application provides the required information in a timely manner, enabling for quicker decision-making. In the event of an emergency, we're aiding families in staying with their loved ones rather than panicking and searching for help.

ARCHITECTURE OF PROPOSED SYSTEM:

The system has both a client and a server side. The client's user and blood bank sides are segregated. These parties will use mobile phones and tablets to access the system. It allows users to check their eligibility for donation and locate blood units when they are needed, while blood banks may update the number of blood units available at any given time. The server consists of real-time database which will store information about users and blood banks.

SYSTEM FLOW:

The proposed method comprises the creation of an Android app for individual users as well as networked blood banks. Both blood banks and individual users must register before accessing the system's services. The authentication process will begin once you've registered, and you'll receive a confirmation email to your registered email address. Once the verification is finished, the user's data will be stored in the real-time database indefinitely. In the event of an emergency, the information Gathered during registration will be crucial. The contact information will be provided when a user looks for blood units. When you search for someone, the app gives you the option to call them directly. When blood is given to other patients or received by other donors, blood banks will be able to update blood units.

CONCLUSION:

The "Blood Bank Management System" initiative aims to play a key role in saving lives and minimising panic in emergency situations. The project's Android-based Blood Bank Management system allows users to look up information on registered blood donors and blood banks such as name, address, and phone number.

REFERENCES:

[1]. K M Akkas Ali, IsratJahan, Md. Ariful Islam, Md. Shafaat Parvez, "Blood Donation Management System", Institute of Information Technology, Jahangirnagar University, Dhaka, Bangladesh , Department of Computer Science and Engineering, Jahangirnagar University, Dhaka, Bangladesh.

[2] Sultan Turhan , "An Android Application for Volunteer Blood Donors", Department of Computer Engineering, Galatasaray University, Instanbul, TURKEY,url:sturhan@gsu.edu. International Journal of Advanced Computational Engineering and Networking, ISSN: 2320-2106.

[3] JavedAkhtar Khan and M.R. Alony, “A New Concept of Blood Bank Management System using Cloud Computing for Rural Area (INDIA)”, TIT Group of Institute of Engineering, Bhagwant University Ajmer, (RJ) INDIA, International Journal of Electrical, Electronics.

[4] Aware SachinB, Arshad Rashid, Ansari Adil, Bombale R.R., “Web Based Blood Donation System.”

[5] A. ClemenTeena, K. Sankar and S. Kannan, “A Study on Blood Bank Management”, Department of MCA, Bharath University, Selaiyur, Chennai-73, Tamil Nadu, India, Middle-East Journal of Scientific Research 19 (8): 1123- 1126, 2014 ,ISSN 1990-9233,DOI: 10.5829/idosi.mejsr.2014.19.8.11202 .

[6] ShyamSundaram,Santhanam , “Real-Time Blood Donor Management Using Dashboards Based on Data Mining Models”, Dept. of Computer Science, DG Vaishnav College Chennai 600106, Tamil Nadu,India.

[7]. “LIFE DONORS: SAVING LIVES BY USING CURRENT ERA SMART TECHNOLOGIES” By College of Computer Sciences and Information Technology, King Faisal University, Saudi Arabia- Journal of Information & Communication Technology Vol. 9, No. 2, (Fall 2015) 55-76.

[8]. A Geo-Location based Mobile Service that Dynamically Locates and Notifies the nearest Blood Donors for Blood Donation during Medical Emergencies Institute of Technology, Nirma University, Ahmedabad-Volume 88