PLASMA DONOR APPLICATION

Literature Survey:

Introduction

Applying optimization methods to healthcare management and logistics is a developing research area with numerous studies. Specifically, facility location, staff rostering, patient allocation, and medical supply transportation are the main themes analysed. Optimization approaches have been developed for several healthcare related problems, ranging from the resource management in hospitals to the delivery of care services in a territory. However, optimization approaches can also improve other services in the health system that have been only marginally addressed, yet. One of them is the Blood Donation (BD) system, aiming at providing an adequate supply of blood to Transfusion Centres (TCs) and hospitals. Blood is necessary for several treatments and surgeries, and still a limited resource.

The need for blood is about ten million units per year in the USA, 2.1 in Italy and 2 in Turkey; moreover, people still die in some countries because of inadequate supply of blood products (World Health Organization 2014). Hence, BD plays a fundamental role in healthcare systems, aiming at guaranteeing an adequate blood availability to meet the demand and save lives. In Western countries, blood is usually collected from donors, i.e., unpaid individuals who give blood voluntarily. Blood is classified into groups (A and subgroups, B, 0 or AB) and based on the Rhesus factor (Rh+ or Rh-), and each donor should be correctly matched with the patient who receives his/her blood. Moreover, as it may transmit diseases, blood must be screened before utilization.

References

S.NO	TITLE	Authors	Abstract	Drawbacks
1	Developing a plasma donor application using Function-as-a-service in AWS	Aishwarya R Gowri *Jain University, Department of MCA, computer science*	A plasma is a liquid portion of the blood, over 55% of human blood is plasma. Plasma is used to treat various infectious diseases and it is one of the oldest methods known as plasma therapy. Plasma therapy is a process where blood is donated by recovered patients in order to establish antibodies that fights the infection. In this project plasma donor application is being developed by using AWS services. The services used are AWS Lambda, API gateway, DynamoDB, AWS Elastic Compute Cloud with the help of these AWS services, it eliminates the need of configuring the servers and reduces the	• Internet: It would require an internet connection for the working of the website. • handle multiple requests at the same time

			infrastructural costs associated with it and helps to achieve serverless computing. For instance, during COVID 19 crisis the requirement for plasma increased drastically as there were no vaccination found in order to treat the infected patients, with plasma therapy the recovery rates where high but the donor count was very low and in such situations it was very important to get the information about the plasma donors. Saving the donor information and notifying about the current donors would be a helping hand as it can save time and help the users to track down the necessary information about the donors.	
2	Optimization of Blood Donor Information and Management System	• K. Yamini, *M. E(CSC), SVCET, Thirupachur, India* • R. Devi, *Asst. Professor, SVCET, Thirupachur, India*	Emergency situations, such as accidents, create an immediate, critical need for specific blood type. In addition to emergency requirements, advances in medicine have increased the need for blood in many ongoing treatments and elective surgeries. Despite increasing requirements for blood, only about 5% of the Indian population donates blood. In this paper we propose a new and efficient way to overcome such scenarios with our project. We have to create a new idea, just touch the button. Donor will be prompted to enter an individual's details, like name, phone number, and blood type. After that your contact details will appear in alphabetical order on the screen; the urgent time of a blood requirement, you can quickly check for contacts matching a particular or related blood group and reach out to them via Phone Call/SMS through	• The accuracy of the location displayed on the map was beyond the scope of this Project. • Only Android was used as a mobile operating system to test the application

			the Blood donor App.	
3	Blood Bank Management Information System in India	• Vikas Kulshreshtha *Research Scholar*, • Dr.Sharad Maheshwari, *Associate Professor*	A blood bank is a bank of blood or blood components, gathered as a result of blood donation, stored and preserved for later use in blood transfusion..To provide web based communication there are numbers of online web based blood bank management system exists for communicating between department of blood centers and hospitals, to satisfy blood necessity, to buy, sale and stock the blood, to give information about this blood. Manual systems as compared to Computer Based Information Systems are time consuming, laborious, and costly. This paper introduces the review of the main features, merits and demerits provided by the existing Web-Based Information System for Blood Banks. This study shows the comparison of various existing system and provide some more idea for improve the existing system. First I will give some basic introduction about blood banks then I will try to provide comparative study of some existing web based blood bank system. After that I will introduce some new idea for improving the existing techniques used in web based blood bank system and at end I will conclude this paper	• Do not provide the better inventory solution to the end use • It requires an active internet connection.
4	A Research Paper on Blood Donation Management System	• Devanjan K. Srivastava • Utkarsh Tanwar • M.G.Krishna Rao • Priya Manohar • Balraj Singh	Blood donation and transfusion has been an ever-serious issue and the shortage of blood throughout the world has caused many people to lose their life. The lack of a centralized system for blood donation is majorly responsible for those losses. Now in the era of online and digital	• Internet Connection is mandatory • There is no proper centralized database for registered donors

			processes, the conventional methods of collecting blood are absolute. An automated system is required to manage the centers and to showcase the information to the interested parties. We have developed a website that singlehandedly solves all these issues related to blood donation and reception. We have designed a SQLite database as an integral part of the integrated framework to store historical blood donation data in a centralized database for analytical processing. The proposed system would enable people to register as a donor to make themselves available whenever in need of their blood type. We have introduced a search tab to search available people ready to donate. In our proposed system in the donor registration, health-related details would be updated in the blood management system database for all to see.	
5	A Study on Blood Bank Management	• A. Clemen Teena, K • Sankar • S. Kannan	'Blood Bank Information System' will be an information management system which helps to manage the records of donors and patients at a blood bank. The system will allow the authorized blood bank officer to login using a secret password and easily manage the records of the blood donors and the patients in need of blood	• No search filter available • UI improvement in Login page