BLOODLINK DIGITAL DONOR NETWORK

GROUP : 17

ABSTRACT :

Blood donation plays a significant role in saving the lives of many people worldwide. However, the traditional methods of blood bank management are time-consuming and prone to errors. To address this issue, we have developed a web application for blood bank management that can help blood banks efficiently manage their blood inventory, donor registration, and blood distribution. The web application allows the blood bank to manage the entire blood donation process, from donor registration to blood collection. The web application is also designed to improve the communication between the blood bank and donors in future.

INTRODUCTION :

Blood donation is a critical aspect of healthcare systems worldwide. However, blood bank management has traditionally been a time-consuming and paper-based process. Blood banks are required to maintain accurate records of blood donations, blood type, and expiry dates of blood units. The traditional methods of blood bank management have several limitations, such as the possibility of errors in record-keeping, long waiting times for donors, and inefficient blood inventory management. Therefore, there is a need for a modern and efficient blood bank management system.

Safe blood is essential to reduce morbidity and mortality rates in healthcare facilities.
According to some reports, India needs 15 million units of blood each year but manages to collect only 11 million units, a deficit of 4 million units. Every two seconds, someone in India needs blood, with over 12,000 people dying every day in the country due to non-availability. Additionally, one in 4 maternal deaths in India is due to excess loss of blood, and blood shortages in hospitals are prevalent. While this is one side of the coin, the other side indicates that India wastes about 6.5 lakh units of blood and blood components each year, due to lack of proper storage facilities. This problem is further compounded by the high prevalence of anaemia in India. More than one million new people are diagnosed with cancer each year. Many of them will need blood, sometimes daily, during their chemotherapy treatment. A single-car accident victim can require as many as 100 units of blood. Women suffering from bleeding during pregnancy or at childbirth, women and children suffering from anemia due to malnutrition, victims of trauma, etc., all need blood or/and blood-related products like plasma or platelets.

Blood shortages can occur due to various factors, such as increased demand during emergencies or natural disasters, lower donation rates during holidays or vacation periods, and challenges in maintaining an adequate supply of rare blood types. These shortages highlight the importance of regular blood donations to sustain blood banks throughout the year.

Blood safety relies on public awareness and education. Promoting knowledge about the importance of blood safety, encouraging regular blood donations, and addressing common misconceptions help build a strong culture of blood safety within communities.

Some reports suggest that India does not have even a single well-managed blood bank in at least 63 districts as of September 2020. This lack of blood banks facility also adds to the healthcare delivery burden, resulting in loss of lives in emergency situations like trauma/accidents. Many individual hospitals are striving hard to ensure there is a proper supply of quality blood to those in need; but the network of blood banks must grow in numbers to ensure we address this concern.

PROPOSED PROJECT :

A BloodLink Digital Donor Network is a web based application designed to manage blood donations, inventory, distribution and overcome the problems faced in the lack of blood availabilities by making the awareness, networking digitally , with blood donation camp and physically in proposed system networking.

METHODOLOGY :

Following is some of the modules(How application works) listed below of the Project :

1. User Authentication: The first step is to implement a secure user authentication system that allows users to register, log in, and manage their profiles. This would include features such as email verification , password reset for added security.

2. Donor Management: This module would allow users to register as blood donors by filling out a form with their personal and medical information. Once registered, they would be able to update their details, view their donation history, and receive notifications about upcoming blood drives shortages.

3. Receiver/ Patient :
   This module would allow users to register as blood receivers by filling all information. Once registered then they can used the blood receiving facilities from near by blood donor and blood banks.

4. Inventory Management :
   This module would enable blood banks to manage their inventory of blood products, including whole blood, plasma, and platelets. It would allow them to track the expiry dates of blood products and alert staff when supplies are running low in future.

5. Database :
   In this project, data set is utilized to have a record and deal with the exchanges of blood donated and blood that are issued. The principle reason behind this framework is to keep put together records the board of blood. Data like Donor Details, Blood Collection, Blood demand, and Blood issued are maintained. Month to month measurements records are put away utilizing data set. It gives incredible assistance in the appropriately checking of blood accessible in the blood donation center and for simple handling of blood demand.