Development of a Blood Bank Management System

Abstract :

The process of managing the blood bag that is received from the blood donation events needs a proper and systematic management. The blood bag must be handled with care and treated thoroughly as it is related to someone's life. The development of Web-based Blood Bank Management System (BBMS) is proposed to provide a management functional to the blood bank in order to handle the blood bag.). The technology platform in implementing this system uses programming environment with Java and JSP, using MySQL for SQL database and HTML5, CSS,PHP and JavaScript for web development.

Introduction:

The major point of this project is to make a flexible platform for making the blood reach the hospital doors, as it one of the

important elixir of our life. Situations where the need of blood arises such as accident victims, patients undergoing major surgeries require whole blood, where the blood is used directly after testing . Our paper is classified into various sections. The registration in the website is made compulsory for the security purpose. It will allow only registered and authorized hospitals, hence fake profiles cannot access the website and provides access to authorized users. The user can be a hospital management or a donor The website collects the complete hospital address and the required blood type from the hospital management. The database is maintained for blood bank details and donor details. The blood banks are classified into district wise for easy calculation . The hospital address is converted into geo-coordinates by the geolocation. The haversine algorithm is used to find the distance between stored blood bank address and address of the hospital. The

blood bank is ranked and displayed by TOPSIS . There might be certain cases that the required blood may not be available. Here comes the need of selecting the donor using RVD (Regular Voluntary Donor). The database created using MySQL stores the blood bank details and the donor details.
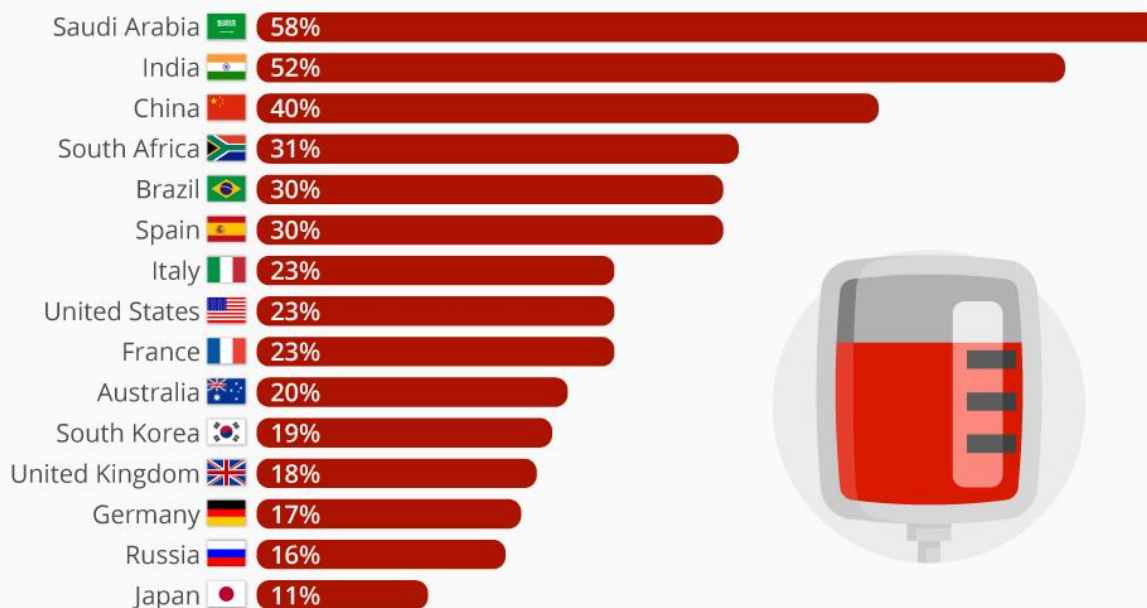
Problem Statement:

The percentage of people donating blood is increasing day by day due to awareness to donate blood for those needed. The blood received have to be managed thoroughly so that there will be no negative effect to the blood receiver once they received blood. From the observations and interview conducted that have been made during the user requirements phase, it was found out that there is no interaction medium between BBMS and the public to announce their blood donation schedule. The blood donation event schedule is normally

advertised to the public so that they are aware of the blood donation campaign period. At the blood house unit, the staffs and nurses only are informed about the blood donation schedule for each month on the whiteboard at the blood house. So they are using manual way in informing the schedule. The problem arises when the space provided is not enough. The medium used to inform the staff about the schedule of the month is using whiteboard and it is written by using whiteboard marker. Therefore, the writing tends to become unclear. The public did not have knowledge about blood donation. There are brochures distributed to the donor but not to the public because they only available at blood donation house. Hence, the public are not getting any details information about blood donation unless they go to the blood donation house give bad effects. By giving awareness to the public, this will increase volunteers to donate their blood.

The COVID-19 pandemic has a negative impact on the blood donation process, and the whole world nowadays is struggling to maintain a sufficient safe blood supply. The aim of this study was to identify the reasons for lapsing from blood donation during the COVID-19 pandemic among the Sudanese blood donors, and also to determine the motives for returning to blood donation.

Where People Are Most Willing to Donate Blood
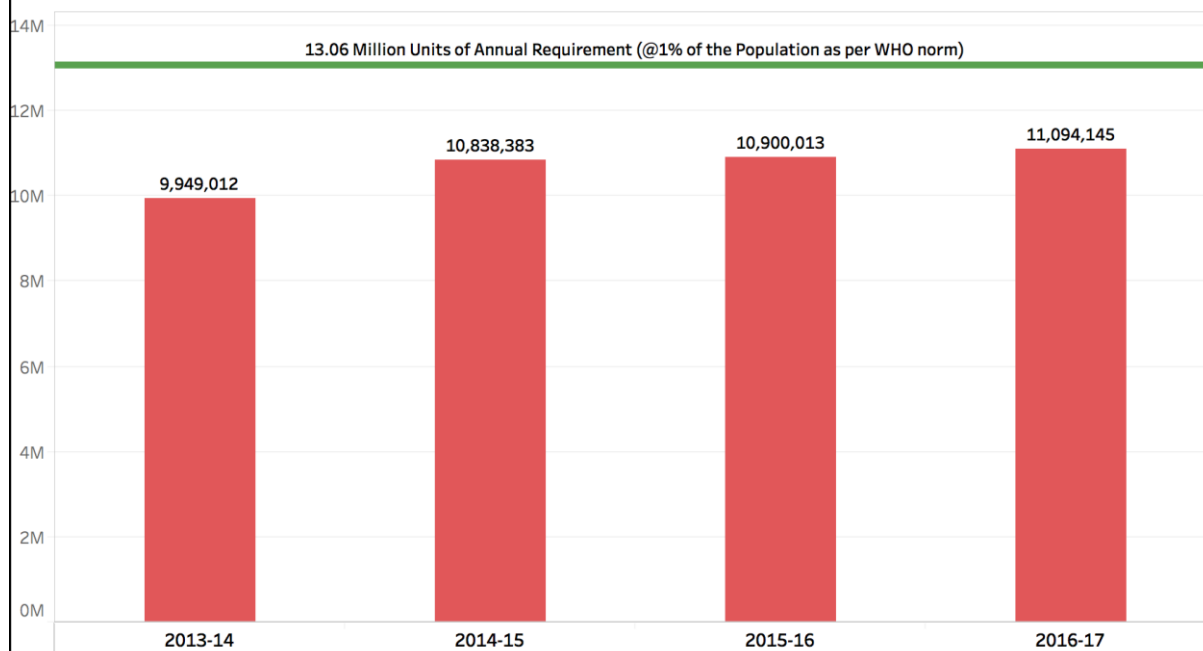
"I frequently give blood to help others" (share agreeing)*

Country	Share
Saudi Arabia	58%
India	52%
China	40%
South Africa	31%
Brazil	30%
Spain	30%
Italy	23%
United States	23%
France	23%
Australia	20%
South Korea	19%
United Kingdom	18%
Germany	17%
Russia	16%
Japan	11%

* Selected countries
n=23,249 online adults across 28 countries (May 25 – June 8, 2018)
@StatistaCharts   Source: Ipsos MORI

statista

Number of Units of Blood collected by Year

13.06 Million Units of Annual Requirement (@1% of the Population as per WHO norm)

Year	Units
2013-14	9,949,012
2014-15	10,838,383
2015-16	10,900,013
2016-17	11,094,145

Market Player Product Sales Volume Market Shares

- CBR Systems: xx%
- Virgin Health Bank: xx%
- National Cord Blood Program: xx%
- Cord Blood America: xx%
- Cryo-Cell International: xx%
- Cordlife Group: xx%
- Lifebank USA: xx%
- Other : xx%