Web based blood bank management system

Vedanti Vishnu Deshpande	*Shubham Kumar*	*Supriya Chaple*
vedantideshpande123@gmail.com	*shubhamkr1805@gmail.com*	*supriya.chaple@gmail.com*
Rajiv Gandhi College of Engineering and Research, Nagpur, Maharashtra	*Rajiv Gandhi College of Engineering and Research, Nagpur, Maharashtra*	*Rajiv Gandhi College of Engineering and Research, Nagpur, Maharashtra*

ABSTRACT

A blood bank is a bank of blood or blood constituents. "Blood Bank" means the storage of blood and where the blood is tested and preserved. Blood is an unstable product with uncertainties in both supply and demand and bloodstock management is, therefore, a judicious balance between shortage and wastage. The website eases the easy access to the blood of different blood groups as per the need of the particular person. The website also tells us about the bloodstock details, blood Issue details and it is regularly updated by the authorized person in the respective blood banks. Improvement of a blood supply chain is a hard process. To improve this, the web-based blood bank management system is accessible.

Keywords— Blood Bank, Blood Group, Blood Bank Management System

1. INTRODUCTION

A Blood bank is a bank of blood or blood constituents. "Blood Bank" means the storage of blood and where the blood is tested and preserved. For blood requirements, a person needs to check for a donation camp or need to visit a blood bank. Some blood groups are not available all the time at all blood banks, and a person finds difficulties to track the availability of blood.

Blood Bank refers to the process of testing, collecting, separating and storing blood. It would also ease the track of searching for blood of the required blood group and would instantly get the required group through this website. If someone needs blood, first he searches it within his family members, then nearest hospitals and blood banks. If they cannot manage blood in these ways, it is really hard for them to contact other people to collect blood in a short time. That is the main problem we want to solve through our application. Web Based Blood Bank Management System in which electronic information about the blood bank and blood availability is created. Blood can be a life-saving measure. Blood Bank Management System provides a list of blood banks in your city/area. The blood bank needs to maintain thousands of records. The manual blood bank system has many disadvantages which include it is too time-consuming, and often leads to error, consumes a lot of manpower and the

percentage of accuracy is less. The web-based blood bank management system maintains the list of blood groups available at blood banks, and also helps the person to track and search the availability of blood easily. They can also view the list of blood banks of a particular area with a proper Blood cross match. The blood bank also screens each blood to find out whether its type A, B, AB or O. Blood Bank Management System (BBMS) is a Web-based application that is designed to store the details of blood stock, process, retrieve and analyze information concerned with the administrative management within a blood bank and it is regularly updated. Use this website in case of an emergency. Since almost everyone carries a mobile phone with him/her, it ensures instant location tracking and communication.

2. BACKGROUND

A blood bank is known as a blood collection center, also is an area in which collected blood bags are stored and preserved for future use. The patient requires blood or blood products as a life-saving measure. Most blood banks are still running on manual work in their processes. As such, there is a lack of efficiency because it is still paper-based in collecting information about blood bags. The lack of proper documentation may affect patients' health due to the possibility of having contaminated blood bags. The blood bags' life is not monitored properly. Hence, a web-based blood bank management system might be needed to address these issues and problems encountered.

3. OBJECTIVE

The main objective of this project is to design, develop and implement web-based blood bank management system. This web-based application provides:
- To ensure blood bank to have good supply or inventories of blood bags.
- To check the availability of blood group at any time.
- Support fast searching to find match blood group for the right person.
- To allow proper documentation about the stock details, issue details and other activities.

4. APPROACH

The main approach of the project is – when the user needs the blood bag of a particular blood group, he will search for a

blood bank in which he can receive the required blood group. This website includes admin login. Through admin login, the admin can see the details of the blood bank which include stock details, issue details, view records, edit record, delete and view feedback for easy implementation rather than handling it by manual work.
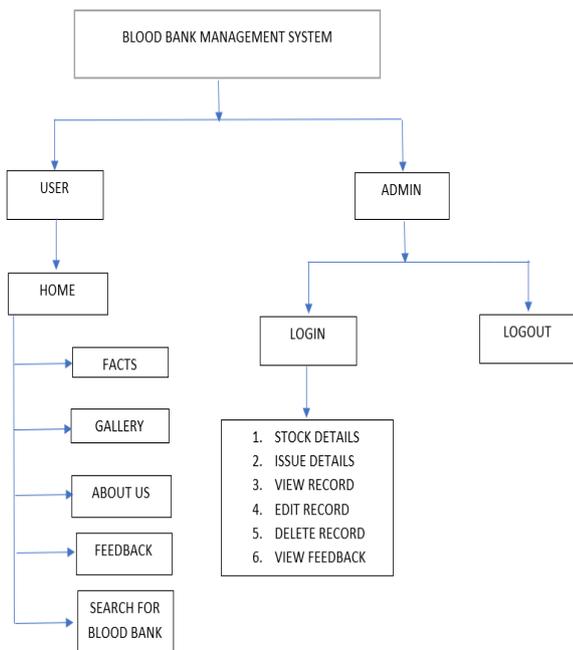
The proposed system consists of the following goals as follows:

4.1 Goals
- To ease the process of manual work
- To improve the existing system.
- To include all the blood banks at least within a city.
- Make sure the website is simple and easy to use.

4.2 Scope
- They can access the nearby available blood banks by using this website.
- It can maintain blood component stock details.
- The system will be more informative by adding new blood banks.
- This system will be linked with different blood banks, so that, they can access it in case of emergency.
- It will also accept the feedback.
- A blood bank has its own systems and limitations and co-ordination between the blood banks.

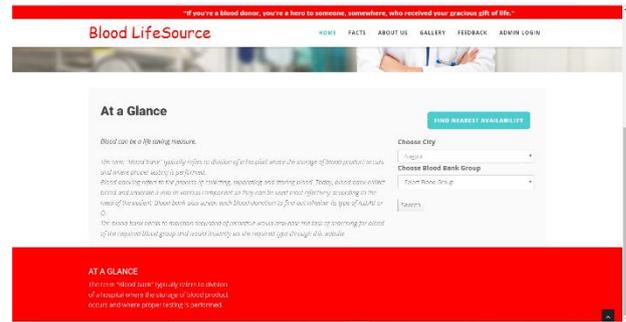**Fig. 1: Flow Chart of Blood Bank Management System**

The above figure comprises of the blood bank management system workflow. A user can go through the facts related to blood bags, gallery. A user can also see the details of the blood banks which contains additional information of the organization. A user can give the feedback about the website.

5. RESULT
Using this system, a person can search blood group available in the city and he can also get contact of blood bank. Blood Bank Management System can be used effectively for getting the details of available blood groups. The Blood Bank Management System is an online website so it will be easily available to everyone. Using this Blood Bank Management System people can search blood group available which they are needed. They can check it online using blood bank management system. Shown below are the screenshots of the
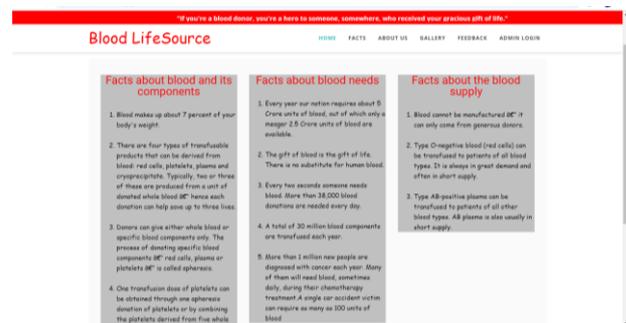
various activities from the web application along with their description.

5.1 Results of Web Application

Fig. 2: Home Page

Description: In homepage there are various fields like facts, about us, gallery, feedback and admin login. The user can also search for the required blood group within the particular city.

Fig. 3: Fact Page

Description: A user can go through interesting facts about blood and its components, facts about blood need and facts about the blood supply.
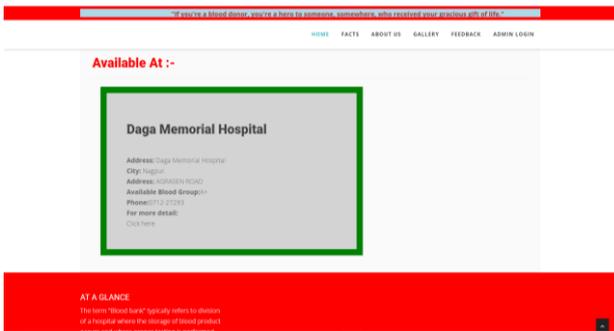

Fig. 4: Gallery Page

Description: Gallery contain the pictures and description about the blood bags, how they are preserved, stored, tested, and their life cycle.
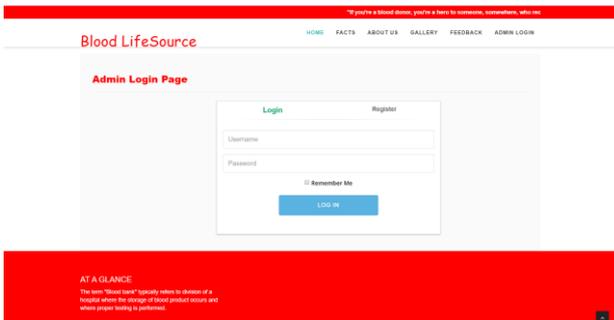

Fig. 5: Feedback Page

Description: A user can give feedback about the website.

Fig. 6: After Search Page

Description: After selecting the required blood group the user will get the information about the blood bank in which his required blood group is available.
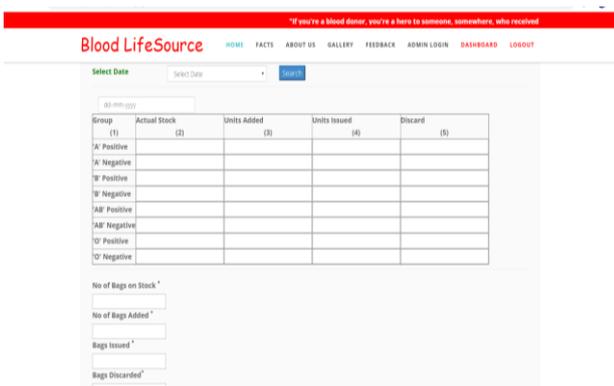

Fig. 7: Admin Login Page

Description: The authorized blood bank person will be provided an id through which they can login into the system.
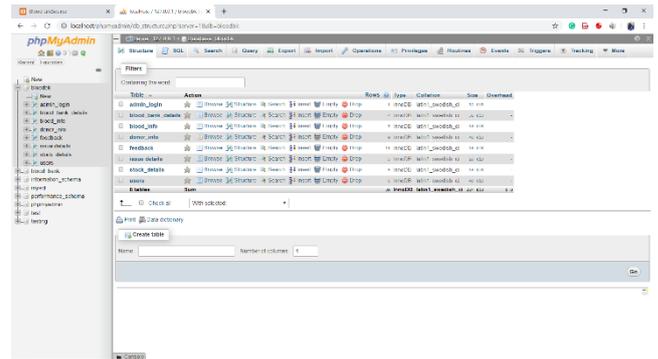

Fig. 8: After login Page

Description: Through admin login, the admin can see the details of the blood bank which include stock details, issue details, view records, edit record, delete record and view feedback for easy implementation rather than handling it by manual work.

Fig. 9: Stock Detail page

Description: In stock detail page after selecting the date the user can input the detail and save the record.

Fig. 10: Database

Description: Separate databases are maintained for the various pages of web application, which mainly consists of the admin login, blood bank details, feedback, issue details, stock details. All the databases will be hosted on the cloud server. This will make them more reliable and also will make them scalable.

6. CONCLUSION
The Blood Bank Management is a 24×7 system. The main advantage of the system is:
 (a) Blood Bank staff can find and manage the details on the system easily.
 (b) Blood Bank can be alerted about issued blood bags and its availability.

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