Online Blood Bank Information System in Aurangabad

Chetana B. Bhagat, Abhishek L. Pophale, Pratik R. Kulkarni, Sauradh S. Mahalankar, Abhishek S. Sarode

Abstract— This paper presents a high-end system to bridge the gap between the blood donors and the people in need for blood. Application for Blood Bank Management System is a way to synchronize Blood banks and Hospitals with the help of Internet. It is a Web Application through which Registered Hospitals can check the availability of required Blood and can send Request for blood to the nearest blood bank or donor matching with blood requirement and can be ordered online as and when required. Blood bank can also send a request to another blood bank for unavailable blood. Person willing to donate blood can find out nearest blood banks using Blood Bank Management web Application. The location of the blood bank can also be traced using maps. The web application can be accessed only by the donors to search the blood donation centres and the requesting blood banks and hospitals to search the nearest blood banks and donors.

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Chetana B. Bhagat, Computer Engineering Department, MGM's Polytechnic, Aurangabad.
(e-mail:chetanabhagat08@gmail.com). Aurangabad.
8999140270

Abhishek L. Pophale, Computer Engineering Department,
MGM's Polytechnic, Aurangabad.
(e-mail:abhisheklpophale123@gmail.com). Aurangabad.
8793720404

Pratik R. Kulkarni, Computer Engineering Department,
MGM's Polytechnic, Aurangabad.
(e-mail:pratikk1916@gmail.com). Aurangabad.
9075494356

Sauradh S. Mahalankar, Computer Engineering Dept,
MGM's Polytechnic, Aurangabad.
(e-mail:sauradhmahalankar0906@gmail.com).
Aurangabad. 9145506030

Abhishek S. Sarode, Computer Engineering Department,
MGM's Polytechnic, Aurangabad.
(e-mail:sarodeabhi14@gmail.com). Aurangabad.
9284871452

Index Terms— Blood Bank Management, Blood Bank, Hospital, Donor, Recipient etc.

I. INTRODUCTION

The population of the world is increasing with each coming year and so are the diseases and health problems. With an increase in the population there is an increase in the necessity of blood. The increasing population of the world effects in a lot of likely blood donors. But in spite of this not more than 10% of the total world population participates in blood donation. With the increasing population and the improvement in medical science the demand for blood has also increased. Due to the lack of communication between the blood donors and the blood recipients, most of the patients in need of blood do not get blood on time and hence lose their lives. There is a terrible need of synchronization between the blood donors and hospitals and the blood banks. This inappropriate management of blood leads to wastage of the available blood record. Improper communication and a synchronization between the blood banks and hospitals leads to wastage of the blood available. These problems can deal with by automating the present manual blood bank management system. A high-end, efficient, highly available and accessible system has to be developed to bridge the gap between the donors and the recipients and to reduce the efforts required to search for blood donors.

II. LITERATURE SURVEY

The blood is the body fluid that all humans and other animal's life is based on and accounts for 7% of the human body weight. It is mainly composed of about 55% of blood fluid called plasma that has 60% liquid part (water) and 40% solid part. And the main thing is that, Blood is needed at some regular intervals and at all times as it has only finite time of storage. Red blood cells about 45% of whole blood that can be stored for about 42 days [3].

The conditions that must be satisfied for the purpose of a donating blood are the donor should not donate blood if he or she has undergone any of the major surgeries in the recent past three months [4]. It should be mandatory that donor must not be under any influence of alcohol 48 hours of time period before donating and all so prohibit smoking on the day before the donation. The donor medication history must be checked for the recent few months.

The recommender web application can provide the users with an appealing or useful object among a large range and variety of possible choices in a personalised way [6].

The web application for blood donation management which provides platform for mobile application that provides an online edge between blood donors and patients who need blood [5]. The interested donors must register their profiles with the website.

III. EXISTING SYSTEM

We gather some of the data about the blood bank management system situated in our city and we find some of the hospitals have its own blood bank unit with each and all technical facilities in a city [2]. There are a number of research work have been done to integrate cloud computing, health sector, and social media. In existing systems, the given blood group and quantity is searched for in the cloud database, where the blood bank data has been stored. When the results are found, they are displayed on the website for the hospital to see [1].

The results contain the basic information of the blood banks that have that specific blood group, ordered by the geographical proximity. In spite of the obtainability of the prospective blood donors not more than 10% of the total Indian population donates blood. Advancement in medical science has increased the blood demand. Also, blood-donors usually don't come to know about the need for blood. These causes inspire us to grow a more proficient system that will assist the present blood donation system.

➤ DRAWBACK OF EXISTING SYSTEM

The existing system of blood bank management system is very complex and not user friendly. This system consumes more and more time to find the donors and the information about blood banks. The existing systems are not providing the information about blood stocks in blood banks.

The existing system stores their data in cloud computing system; therefore it is very hard to find to find the all data in blood banks. The existing systems are not capable to provide GPS system. This system is very complex to maintain time to time for the admin.

IV. PROPOSED SYSTEM

The proposed system (Blood Bank Management System) is designed to help the blood seeker to meet the demand of Blood by sending and/or serving the request for Blood as and when required. The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Banks.

This website will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Banks) and will ensure the fulfilment of demand for Blood requested by blood seeker.

The proposed system consists of the following goals
And has the scope as follows:

A) GOALS:

1. To ease the process of Blood Donation and reception.
2. To improve the existing system
3. To develop a scalable system.
4. To be highly available.
5. To provide open source to the user
6. To provide easily access to the user.

B) SCOPE:

1. To provide all information about blood banks and donors
2. Ensure that all the functionalities of a manual blood bank are covered
3. To include all blood banks at least within a city.
4. Make sure the program is easy to use and access.

V. RESULTS

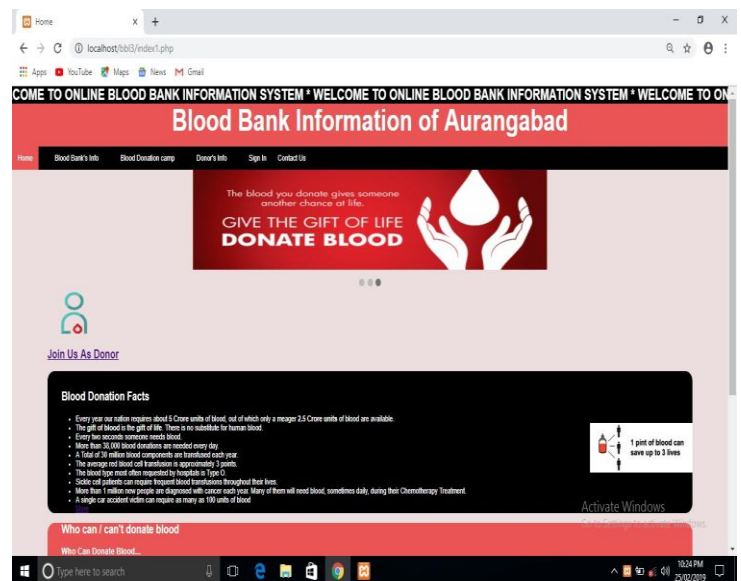Shown below are the screenshots of the various activities from the web application along with their description:-
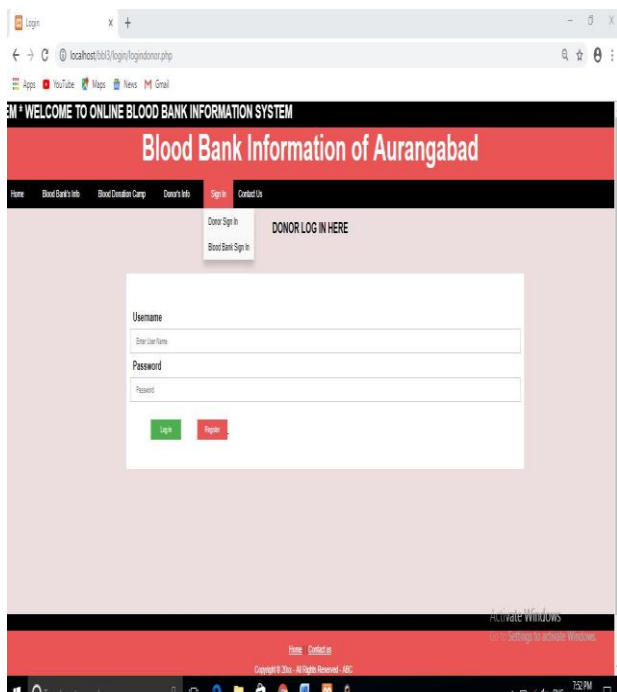

Fig 1: Home Page

Description:

This is the Home Page of our website. This page offers the all necessary tabs which are useful for the user and blood banks.

This website includes the following tabs::

1. Home
2. Blood Bank Info
3. Blood Donation Camp
4. Donor's Info
5. Sign-In
6. Contact Us

The Login Form is follows:

Fig 2: Login Form

Description:

After clicking on Sign-In tab on the Home Page, the user is able to log in our website as a Donor.

If the user is already registered on our website then he/she directly log into the website, but if he/she is not registered then he/she wants to register and then log into the website.

The Donor Registration form is follows:
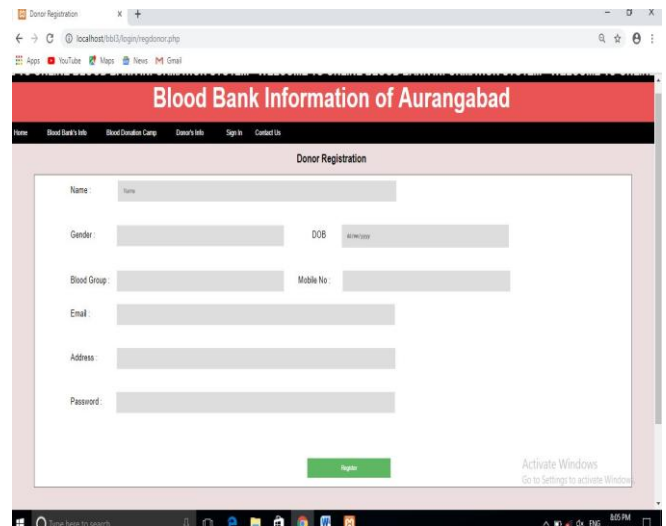
**Fig 3: Donor Registration Form**

Description:

If Donor is not registered then he/she wants to click on register button then he sees registration form. This form requires some personal information about donor.

This form includes following requirements:

1. Donor's Full Name
2. Donor's Date Of Birth
3. Donor's Blood Group
4. Donor's Mobile No.
5. Donor's Address
6. Donor's Email
7. Donor's Password
8. Donor's Profile Pic

After registration the profile of donor will be as:
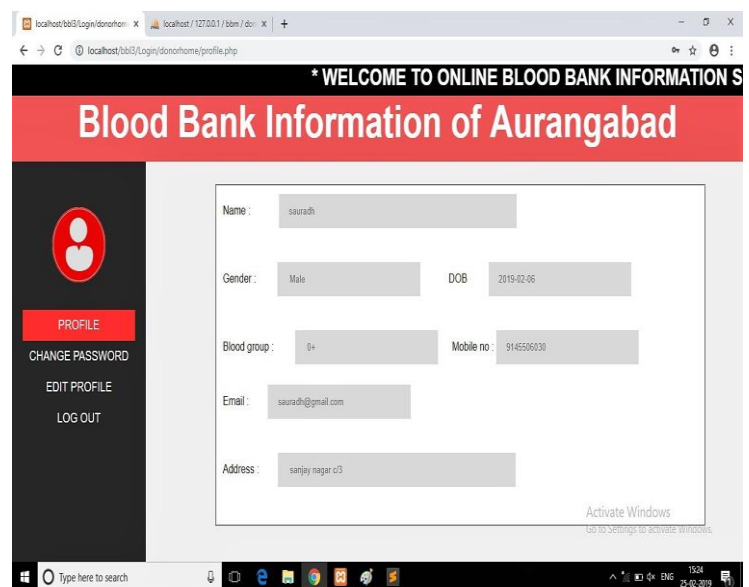
Fig 4: Profile Page for Donor

Description:

This is the profile page of donor. Using this page donor can change the profile as he/she wants to. They can also change their passwords if they wants to:
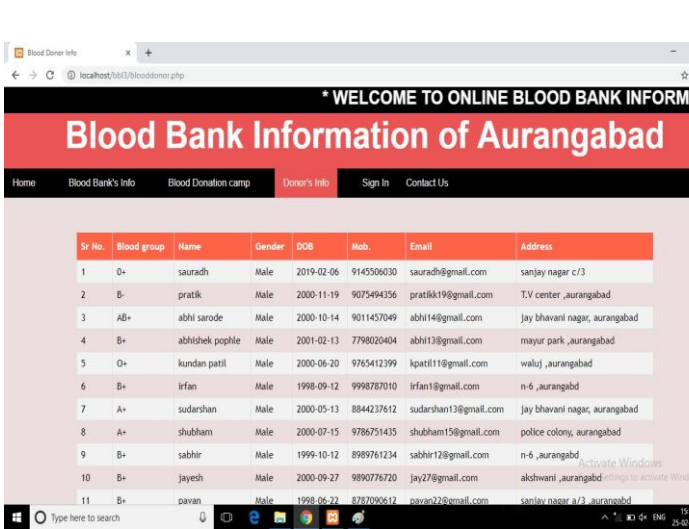
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Fig 5: Donor's List

Description:

The **Fig 5** shows list of donors whose are registered in this website.

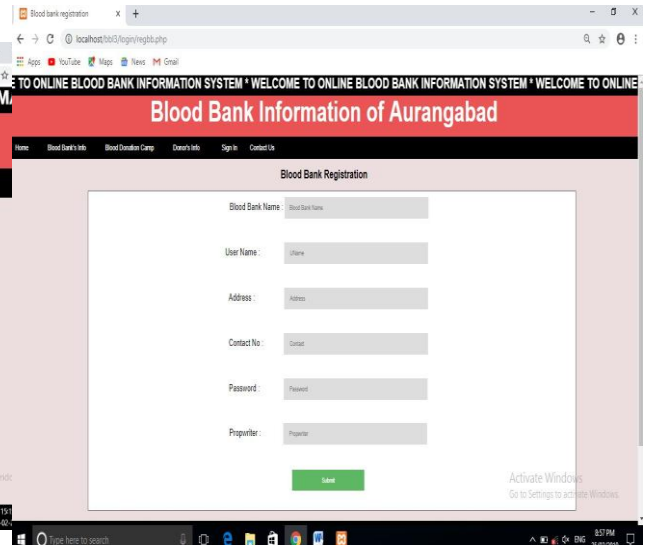After completing Donor's info, we moved to the Blood Bank Page/Forms Information:

Fig 6: Blood Bank Login

Description:

After clicking on Sign-In tab on the Home Page, the user is able to log in our website as proprietor of Blood Bank.

If the Blood Bank is already registered on our website then he/she directly logs into the website, but if he/she is not registered then he/she wants to register and then log into the website.

The Blood Bank Registration form is follows:

Fig 7: Blood Bank Registration Form

Description:

After clicking on register button, the proprietor has to give some personal information.

The form includes following requirements:

1. Blood Bank's Name
2. Blood Bank's Address
3. Blood Bank's User Name
4. Contact no's
5. Blood Bank's Password
6. Proprietor Name
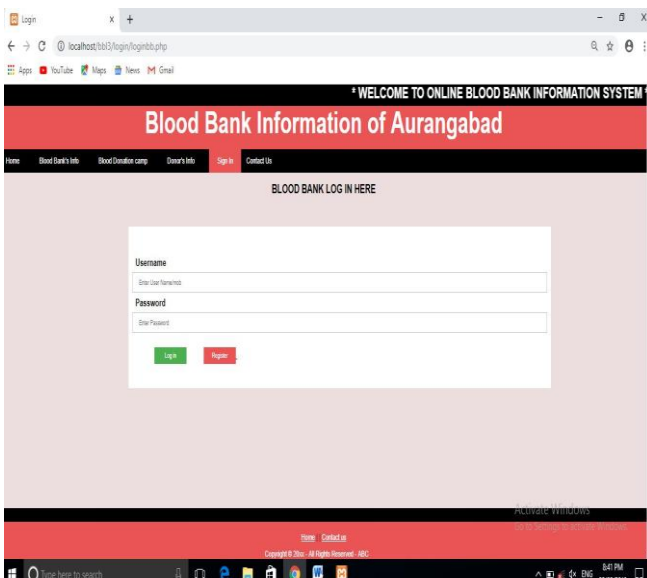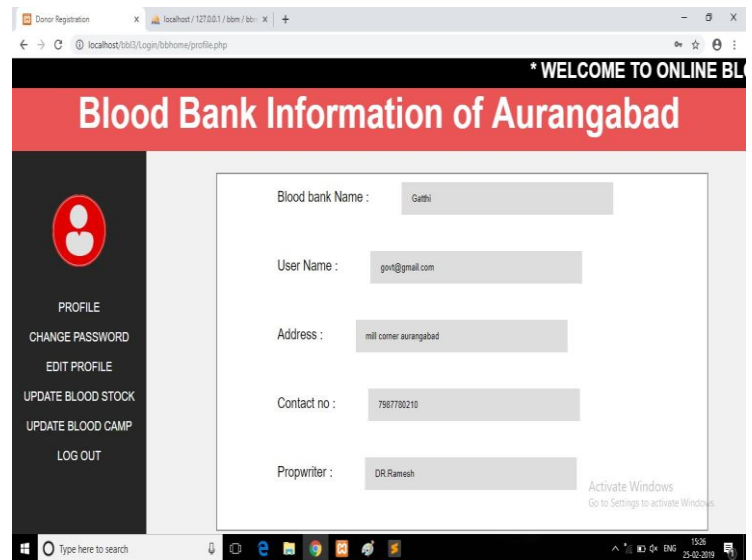
After registration the blood bank profile see as:

Fig 8: Blood Bank Profile

Description:

This is the profile page of Blood Bank. Using this page, the proprietor can update the blood stocks and he/she able to upload information of blood camps.
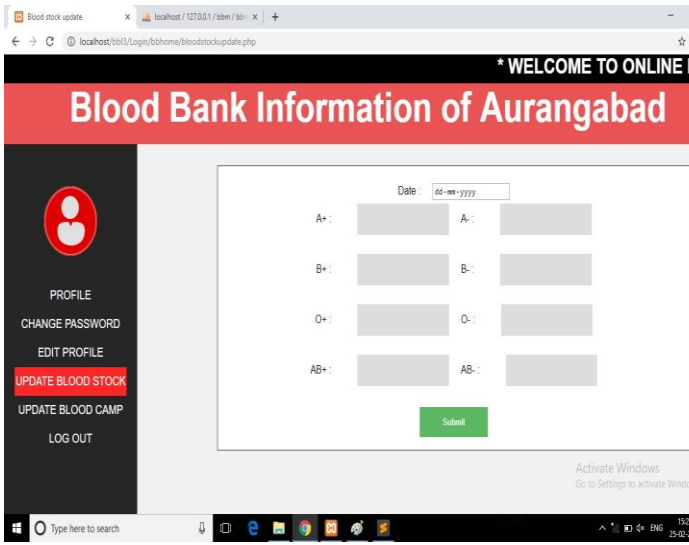
The Blood Stock page is follows:

Fig 9: Blood Stock Update Page

Description:

Using this page, the proprietor can update the blood stocks and maintain database which is used for donors.
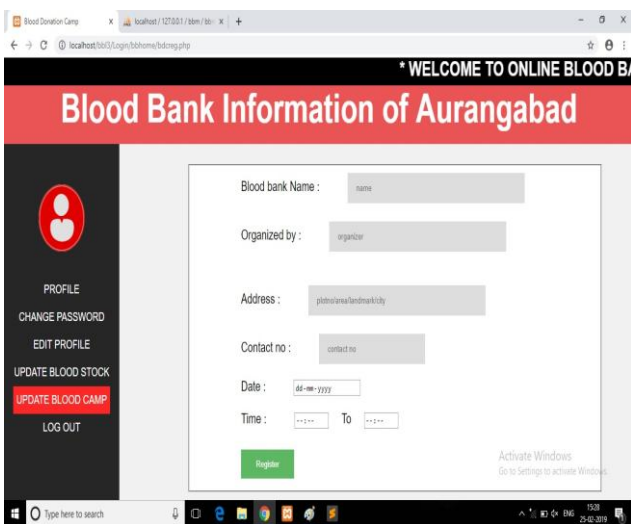
The Blood Camp info page is follows:

Fig 10: Blood Camp Info Page

Description:

Using the profile page, the proprietor can also upload the Blood Camp info. This information is used for Donor's that they can donate in the Camp.

Using this website, the Donor's and Proprietor are able to contact us; this site also includes Contact Us Page:
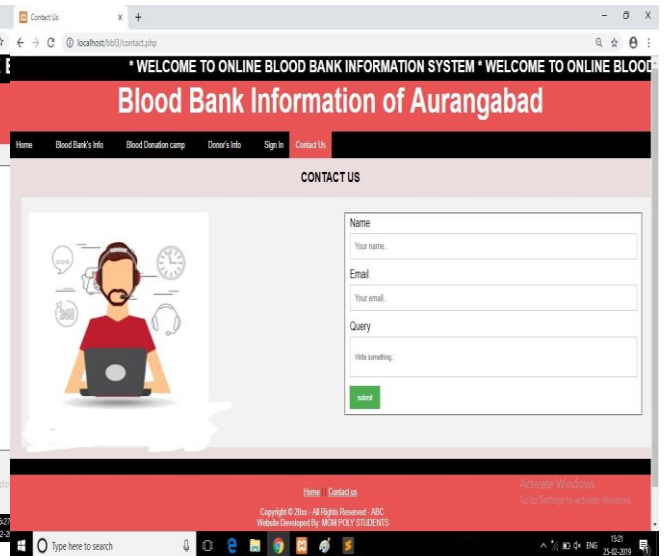

Fig 11: Contact Us Page

Description:

Using this page, the Donor's and Proprietors are able to connect with us. If they are having some issues or query about this website then they can directly contact with us or connect us with our Facebook page.

VI. CONCLUSION

Technology is introducing new innovations day by day, thus reducing the time required to do things. The proposed system can be used to reduce the time required to deliver required blood to the needy in cases of emergency.

The website application can be used by the people interested in donating their blood by locating their nearest blood bank. The web application provides a way of communication and synchronization between the hospitals and the blood banks. It also provides them with the facility of communicating with the nearby donors in emergency.

The database is a vital aspect of the system. The database of the hospitals and the blood banks must be checked for consistency on regular basis for smooth working of the system. The website application is developed using Sublime Test and Xamp which is open source software, hence the system developed is quite feasible.

VII. REFERENCE

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