Online Blood Bank Management System (BBMS)

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Abstract:
A blood bank is a cache or bank of blood or blood components, gathered as a result of blood donation, stored and preserved for later use in blood transfusion. Recent ages in most of the cases there is a need of blood to the injured patients. But friends or relatives or hospital staffs is not having the idea about how many blood banks? Where are they? What type of blood is available, what are the tests conducted on that blood samples? Type of questions is not getting answers immediately. It will take so much of time to search for the required group of the blood. The main objective of the secured integration of online blood bank system is to provide information about the blood banks, the type of blood is available, and how much quantity is therein every blood bank will be maintained accordingly. For the patient angle also the integration of blood banks to the hospital will be very helpful to make the request online to get the blood directly to the hospital. Moreover, who are willing to give the blood can register their names online and later when there is requirement or in the case of campaigns they can donate the blood. Currently no such type of integrated blood bank projects available. So this project will very helpful in the hospital, patient and donors angle. Most hospital blood banks also perform the testing to determine the blood type of patients and to identify compatible blood products for a blood transfusion. This is sometimes done by the collecting agency or a contracted laboratory instead.

Keyword: Blood Bank, Blood bank management system, Management Information System.

I. INTRODUCTION

Blood bank is a place where blood bag that is collected from blood donation events is stored in one place. The term “blood bank” refers to a division of a hospital laboratory where the storage of blood product occurs and where proper testing is performed to reduce the risk of transfusion related events. Pathology Department is one of the most important departments in ashvini Hospital. It processes blood that will be supplied to the patients in hospital, according to their needs. Before the blood is supplied to the patients, the blood will undergo several tests to ensure that the blood receiver is not infected by serious diseases. There are a few units operating in this department such as Blood House Unit, Blood Transfusion Unit, and Blood Distribution Unit. Every month, will organize blood donation event which is one of the way they can increase the blood stock. After the blood donation events, the blood bags that they obtained will undergo tests. All of the blood received at the blood donation events must be managed thoroughly and systematically to avoid patient who need the blood infected by any viruses or diseases. Blood Bank Management System (BBMS) is a web based system that can assists the information of blood bag during its handling in the blood bank. With this system, the user of this system can key in the result of blood test that has been conducted to each of the blood bag received by the blood bank. The result of test will indicate whether the blood bag can be delivered to patient or not. From this system, there are several type of report that can be generated such as blood stock report, donor’s gender report and the total of blood donation according to months and year. A blood bank is a cache or bank of blood or blood components, gathered as a result of blood donation, stored and preserved for later use in blood transfusions. Recent ages in most of the cases there is a need of blood to the injured patients. But friends or relatives or hospital staff is not having the idea about how many blood banks are available nearby them? Where are they? What type of blood is available, what are the tests conducted on that blood samples? Type of questions is not getting answers immediately. It will take so much of time to search for the required group of the blood. The main objective of the secured integration of online blood bank system is to provide information about the blood banks, the type of blood is available, and how much quantity is there in every blood bank will be maintained accordingly. For the patient angle also the integration of blood banks to the hospital will be very helpful to make the request online to get the blood directly to the hospital. Moreover, who are willing to give the blood can register their names online and later when there is requirement or in the case of campaigns they can donate the blood. Currently no such type of integrated blood bank project is available. So this project will very helpful in the hospital, patient and donors angle. Most hospital blood banks also perform the testing to determine the blood type of patients and to identify compatible blood products for a blood transfusion. This is sometimes done by the collecting agency or a contracted laboratory instead.

II] WORKING:
I] login form:

Figure.1. Login form
Description:
The user has to login or register to get started with the Android application. After clicking LOGIN button, the entered password and the entered username will ensure the fulfilment of demand for Blood requested by Recipient and/or Blood Bank.

II. Courier boy:

![Figure 2. Courier registration.](image1)

III. Data flow diagram (DFD)

![Figure 3. Data flow diagram (DFD).](image2)

![Figure 4. Data flow diagram (DFD).](image3)
IV. FUTURE SCOPE

1) In future we can connect all blood banks available in particular city to form a chain system to make available the blood to the needy (patient).
2) There are too many categories of blood depending on the content it includes, in future we can add information about the blood and its content as per the patient filter the blood type which he/she searches for.
3) In future we can also provide login feature for the hospitals to request for blood, also to the blood banks to maintain their donors and if they need blood for stock purpose or if the blood availability is less then they can contact to donor through Email or SMS for donation.
4) In case of accident or emergency the donor of particular blood bank needs for blood then he/she will get concession in blood price, for this when donor donates the blood then credits will be allocated to him/her in their login account.

The proposed system (Blood Bank Management System) is designed to help the Blood Bank administrator 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 Application will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Banks) and will ensure the fulfillment of demand for Blood requested by Recipient and/or Blood Bank.

V. 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 Android 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 proposed system uses Google Maps which provides the user with an efficient way of locating the nearby donors/blood banks. The Android application is developed using Android Studio which is an open source software, while the web application for the hospitals and the blood banks is also developed using open source tools, hence the system developed is quite feasible.

VI. REFERENCES

[1]. http://bloodbankonline.org/
[2].https://www.youtube.com/watch?v=9oELO2-KKiM.