Intelligence Search Of Precious Liquid

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Abstract: Blood is a saver of all existing lives in case of emergency needs. Hospital based blood banks face serious trouble for arm twisting relatives of patients into donating blood during medical emergency. Nearly a decade after the National Blood Policy, the state has directed all blood banks to end the practice of asking for replacement donors. In current world a number of online blood bank databases are available, but none of them offers the capability for the direct contact between the donor and the recipient. This is a major drawback particularly in cases where there is an urgent need of blood. In this paper, website is developed to search the blood donors automatically in the required blood group in the near location of the hospitals. The people who are interested in donating blood can register their ID through the App or Website provided by near-by hospital. The details will be updated in the cloud server. During emergency, the admin shortlists the donor in the required blood group by tracing the people nearer to the hospitals. An Email and a call will be sent to the corresponding donors. The mail contains details like location of hospital, contact details, number of units required. If the donor is not responding for a particular duration automatically call and mail will be sent to next donor in the database.

Index Terms: HTML, PHP, SQL, Spyder, Android Studio

1 INTRODUCTION

Blood is essential to life. Blood circulates through our body and delivers essential substances like oxygen and nutrients to the body’s cells. It also transports metabolic waste products away from those same cells. The requirement for the blood is significant for treating in restorative field. For consistently somebody needs blood to spare their life. The task of blood donation center is to get blood from different benefactors, to screen the blood group database and to send the necessary blood during the need to the emergency. In developing nations, particularly like India, the blood resource lacks in quantity which is a boundary to others life. There are number scenarios where urgent need of blood comes. India has a yearly necessity of around 5.0 million units of blood. The real assortment is as it were around 3.5 million units. There are many shortcomings like decentralized nature of donor and required blood is needed at serious times. Figure 1 represents the annual requirement of blood, according to WHO norms. Manual identification is difficult in the current existing system and tracking the database for particular blood group is complicated. At these critical times, the online blood bank with has an automatic call routing facility will be of great aid. The proposed system helps to identify the blood donors automatically through the webpage developed for donor registration.

Figure 1 Units of blood

2 DETAILS OF BLOOD

2.1 Constituents of blood

Blood plays an important role by performing different functions likes supplying oxygen to tissues, nutrients and removes wastes such as CO₂, urea, lactic acids. Figure 2 implies the different constituents present in blood. Blood cells are also called as “Corpuscles” which consist of erythrocytes (RBSs), leukocytes (WBCs) and thrombocytes (platelets). By volume, RBC constitutes about 45% of whole blood, WBC about 0.7% and plasma about 54.3%.

- Red Blood Cells (RBC) – Carries oxygen and carbon-di-oxide through blood
- White Blood Cells (WBC) – Part of Immune System
- Plasma – the medium through which the blood cells are transported around the body
- Platelets – Tiny blood cells which facilitates to blood clotting

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2.2 Requirement of blood transfusions
Statistics states that at regular intervals somebody needs a blood transfusion. Blood transfusions are utilized for injury exploited people - because of accidents and consumes - heart medical surgery, organ transplants, ladies with difficulties during childbirth, infants and untimely children, and patients accepting treatment for leukaemia, malignancy or different maladies, for example, sickle cell illness and thalassemia.

2.3 Criteria’s to be considered for blood donation
Most people can give blood if they are in good health. There are some basic requirements one need to fulfill in order to become a blood donor. Below are some basic eligibility guidelines provided by WHO

- An individual who is between 18–65 years’ old
- A haemoglobin level of not less than 12.0 g/dl for females and not less than 13.0 g/dl for males
- An individual whose weight isn’t under 50 kilograms
- An individual whose body temperature is ordinary at the time of donation
- An individual should have positive test for HIV (AIDS virus)
- An individual who is free from all maladies
- An individual who has not taken any prescription over the most recent 48 hours
- An individual who has not reached jaundice in the past three years
- An individual not dependent on drugs

3 EXISTING METHOD
Blood plays a vital role in all living beings, especially humans. Due to the development of technologies the rate of accidents increases day by day, at these situations the blood plays a key role. Many blood banks are available to supply the blood, but they fail to give a blood at the correct time. A number of online service are available to get the donor, however they fail to provide the direct contact between the donor and recipient. This is the major drawback in finding the donors when there is a urgent need of blood.

4 METHODOLOGY
The people who are interested in donating the blood can register their ID through the website provided by near-by hospitals. The details will be updated in the cloud server. During emergency the “Admin” shortlist the donor in the required blood group by tracing the people nearer to hospitals, automatically call and message will be sent.

4.1 BLOCK DIAGRAM
This is the website that will be given to the hospitals, blood banks which includes the single person access called admin of this website. Figure 3 explains the process involved in the blood donation. The people who are willing donate the blood can register through the website provided by the hospital. The details of the donor are stored in the cloud server. Whenever the blood is need during the emergency situations, the admin gives the request for the recipients by giving the type of blood need, location of the hospitals, amount of blood need at that situations and contact number of the admin. The data are fetched from the server and automatically call and message will be sent to the particular donor. If that particular donor is not available in the nearby location, automatically call and message will be sent to the next available donor.

4.2 WEB INTERFACE
Web Interface helps the admin to view the donor list, number of donors registered and allows new donors to register to the database. Programming languages used for creating a webpage are HTML, PHP. Web page for donor registration is shown in the figure 4. Donor registration includes name, father’s name, gender, blood group, body weight and height, date of birth etc.
needed the admin fetches the required blood donor from the cloud. Figure 5 shows how the details of the donor are stored in the webpage.

Once the blood is needed in a particular hospital, automatically message will be sent to the required donor with certain information. Figure 6 and figure 7 represents the information sent to the corresponding donor respectively. Information includes the message "NEED OF BLOOD WITH YOUR BLOOD GROUP", name of the hospital, location of the hospital, contact number of the admin, latitude and longitude distance between the donor and the hospital.

Blood is a life-giving fluid that delivers oxygen to the cells of the body. Searching of blood in a critical situation is difficult take in hospitals. Figure 8 shows the automatic calling of the donor in the emergency situation.

5 RESULTS AND DISCUSSIONS

7 CONCLUSION

We know that blood is a primary concern of our life. Within excess of 1200 road crashes happening each day in India, 60 million injury initiated medical procedures are performed in the nation consistently. The 230 million significant tasks, 331 million malignant growth related systems like chemotherapy and 10 million pregnancy confusions all require blood transfusion. There are lot of situations where the blood is needed to save the human life. Our project provides a complete solution to save the human life by automating the searching process.

8 REFERENCES

International Federation for Information Processing 2006.