UBlood: Utilize every cell of Blood- A Proposed Mobile based Application Framework

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Abstract-Emergency situations, such as accidents, create an immediate and critical need for specific blood types. In addition, advances in medicine have also increased the need of blood for various treatments and surgeries. In short, blood is a saver of all existing lives. So in such emergency cases, it is difficult for hospital staff to collect blood in case of shortage of blood without having appropriate resources. Our system solves this problem. This project is to build a web-based, online blood donation system, named Ublood System. This system provides an online platform for a quick access to the required donor. In addition to web application, an android mobile application is proposed to search the donors who are available nearby during the emergency cases such as accidents. Hence the life at threat can be saved by this optimization technique.

INTRODUCTION

Ublood system is a web application developed for blood donations. This consists of two set of users, Administrators and Blood Donors. Administrator login is created for chief doctors in major hospitals which run this web application. Blood Donors who are willing to donate blood have to register in the system. While registering the donors are requested to give the details such as Blood Group, Available days when the user can donate blood, Location, etc. When blood is needed for a person, then the corresponding administrator should add the details of the patient such as, Patient name, Blood group, Location of the hospital, etc. The system will automatically analyze the list of donors who can donate blood for a particular patient. Then the system compares the location of the person and the hospital where the patient is admitted. Then the system compares the day of blood needed and the day's availability of the donor. Finally for the qualified donors E-MAIL and SMS Alert will be sent to the donor and a mail will be dispatched to the donor login page of the system and a SMS alert will be generated on Mobile phone of respective donor. If the donor is interested in donating blood then he can login to the system to see the full details. Several donors may be interested in donating blood and it may create confusions. So, once a donor reaches a hospital for blood donation. It should be updated in the system. Then the system will automatically send E-MAIL and SMS Alert to all the remaining donors that their need is fulfilled.
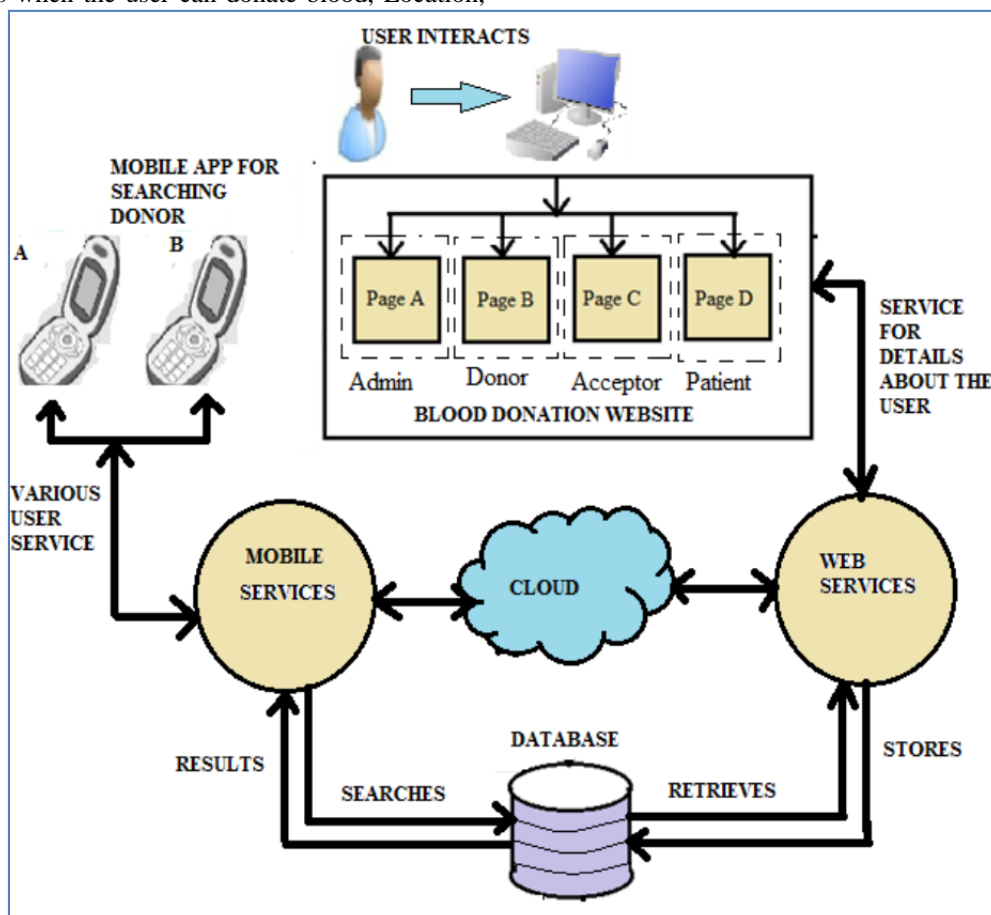

Figure 1: A Proposed Mobile based Application Framework for Blood Donation

PROPOSED WORK

The proposed method is to create a website with an SMS service so that the blood donors are available easily within the required time. The registered donors who are in nearby location are contacted via SMS and E-mail. The purpose of website is to make available donors who are willing to donate blood can reach hospitals, through the information provided by the website.

The proposed system is used for maintaining whole information about blood. In this proposed system mainly 6 modules are there-Admin, Donors, Acceptors, Patient, System database and Blood requirement SMS or E-mail.

A. Admin

This module focuses on the both donors & acceptors. Each member in a donor & acceptor is given a user id and password, which identifies him uniquely. The options given to administrator in the interface are - Change Password, Maintain donor details, Maintain acceptor details, Update donor details, Update acceptor details, Logout.

B. Donor

Each member in a Donor is given a user id and password, which identifies him uniquely. The member is given a login form. He enters the login details user id and password. The options given to a donor are - Change password, view profile, accept, request, logout.

C. Acceptor

Description about acceptors. The acceptors are given options in the interface to - Change password, Find a blood group, Who needs blood, Logout. Acceptor is the one who needs blood for someone in the hospital.

D. Patient

This module gives information like patient's name, patient's blood group, required date and their contact information. The type of blood needed as per the health condition of patient. Since this is a critical phase where the donated blood is split up into different blood where it should be suitable for the patient.

E. System Database

Stores all the details about the donor, acceptor and patients information. There will be an option for updating the personal information by the users. This is for tracking and managing information.
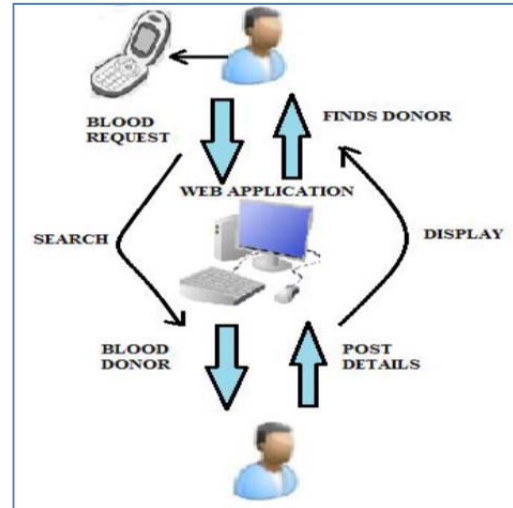

Figure 2: Scenario of the proposed method
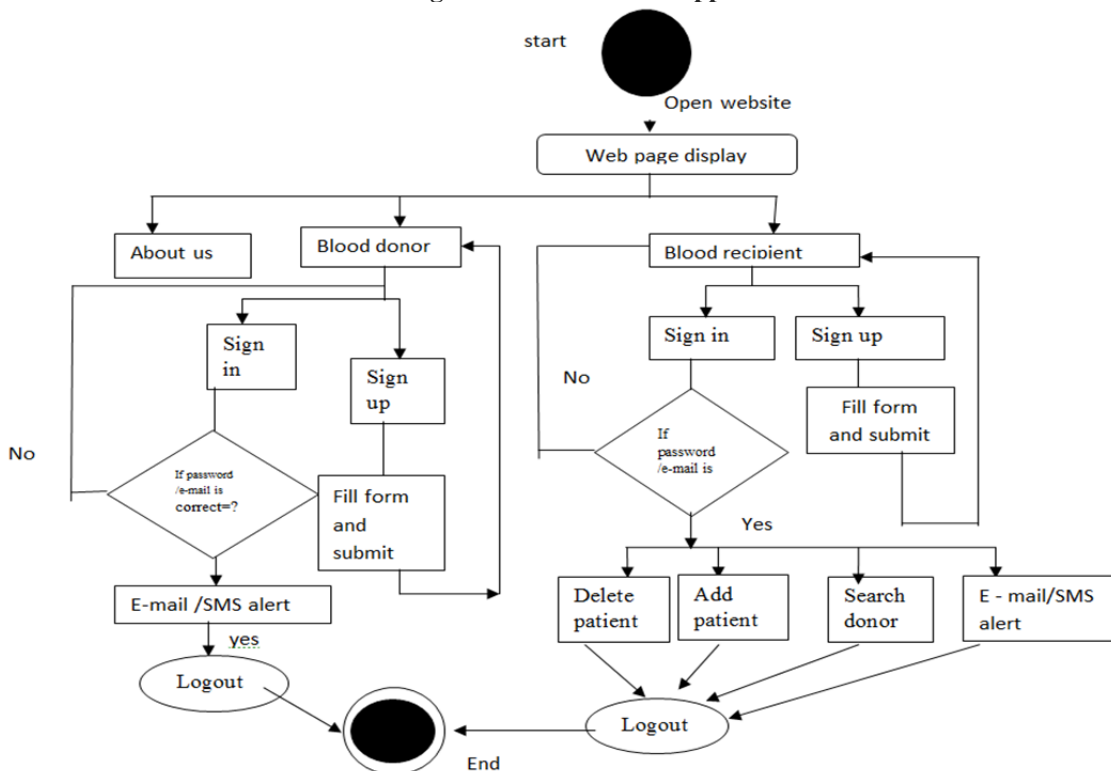
Working of our website & an application:

Fig.3: Working

CONCLUSION

In this paper, we have proposed an efficient and reliable blood donor information and management system based on Asp.Net application. The service provided by the proposed system is needed and valuable to health sector where a quality of the blood is considered for the safety of the patient through a systematic process by the blood management system. This system will be the solution for the problems such as wrong information of donors, misuse by third parties and updating the donated blood by the donor which replaces the older systems. The proposed system is a web based application helps us to reduce the human mistakes which are done in the existing system. The wireless internet technique enables the flow of data to work more rapidly and conveniently. This is application to process through SMS services. By this the contact detail is hidden from other members.

WEB REFERENCES

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