Blood bank management system

E. M. S. S. Ekanayaka and C. Wimaladharma
Faculty of Science and Technology, Uva Wellassa University of Sri Lank, 90000, Sri Lanka

Introduction

Requirement of blood for the National Blood Transfusion Service of Sri Lanka has increased in last three years. Hence it is essential to increase the number of blood donors and maintain efficiency and updated service. In the last 10 years, the number of voluntary donors has been increased compared to non-remunerated donors. Though, there is an increased voluntary blood donor, because of the lack of information relating to bold donation, many people become disentitle to donating blood. Because of this reason, National Blood Transfusion Service of Sri Lanka continuously loses a bulk of acquirable blood for a year from people who are willing to donate blood. To organize blood donation campaigns, organizers need to go to the nearest blood bank to inform and get necessary things to organize blood donation campaigns. It is more time consuming and difficult task. Emergency patients, who need blood immediately, request blood through advertising on televisions or social media. To make the matter worse, National Blood Transfusion Service of Sri Lanka gets island wide blood stock update once a month. It causes further difficulty in terms of making decisions. "The Blood Bank Management system" is a web based system that directly addresses above problems by integrating relevant functions. Blood donors can register on the system and continuously they will be notified about the campaigns via SMS (Short Message Service). Campaign organizers can organize campaigns online and get responses from blood donors. Patients can request blood via online or sending a SMS. Daily blood stock can also be handled through the system.

Methodology

Blood Bank Management System is a web based system with integrating SMS alert function that implemented using HTML, PHP, CSS, JavaScript and JQuery for web development and MySQL for database design. Blood donor can register on the system and it will provide with a donor an ID. Blood campaign organizers can organize a campaign through online. The request is sent to the particular blood bank officer and officer can approve or reject the request. Once he/she approves the campaign, donors may get SMS notification to their mobile by informing the campaign. Not only that, organizer informs with the approved status via SMS to the organizer's phone. Patients can request blood via online or just by sending a SMS to the system. Then system will inform to all the relevant donors with the request. Blood stock will be handled day by day through the system. Blood bank officer can add or remove a donor to the system and from the system. Also he can add blood stock to the relevant blood bank. Blood Bank Management system has separate Admin panel. Administrator can view island wide blood stock either as blood group or branch. Furthermore, administrator can add a new bank to the system as well as a user to the system.

Results and Discussions

According to the literature, some online systems are used in some foreign countries. However, there is no proper online system available in Sri Lanka. Blood Bank Management system is an efficient system as it is integrating all the functions with a SMS alert facility. The main goal of the Blood Bank Management system is to gather all the blood donors into one place automatically and inform them constantly about the opportunities to donate blood via a SMS to the donor's mobile phone. Also the system should have functions to organize blood campaigns online. It makes easier to organizers to organize blood donation campaigns. Also the system is capable of handling blood stocks. Through t he daily updated blood stocks, management can make decisions effectively. Further system facilitates with the function that emergency patients can request blood online or by sending a SMS to the system. Ultimately the system provides proper communication among the blood donors, campaign organizers and the people who need blood.

Conclusion

This study focused about the development of new Blood Bank Management System. This system is totally web based application integrated with a SMS gateway technology. The system was localized for the local user and users interfaced were developed to attract user intention within the range of professionally. System maintenance is achievable.

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