BLOOD DONOR INFORMATION SYSTEM

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ABSTRACT

At present, even though they are many donors but they are still patients who are suffering and dead due to unavailability of blood at correct time. The population of the world is multiplying with each coming year and so are the diseases and health issues. With an increase in the population there is an increase in the need of blood. The growing population of the world results in a lot of potential blood donors. But in spite of this not more than 10% of the total world population participates in blood donation. With the growing population and the advancement 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 dire need of synchronization between the blood donors and hospitals and the blood banks. This improper management of blood leads to wastage of the available blood inventory. Improper communication and synchronization between the blood banks and hospitals leads to wastage of the blood available. These problems can be dealt with by automating the existing manual blood bank management system. Ahigh-end, efficient, highly available and scalable 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. In this system, the patients are provided an organized way of reaching the donors by sending messages to their phones that are in and around their surroundings.

INTRODUCTION

For hospitals, a blood bank known as blood collection center, also is an area in which collected blood bags are stored and preserved for future use in blood transfusion services. Blood transfusion is a medical operation where a patient requires blood or blood products as a

life savingmeasure. . In an article published in Times of Oman in 2014, it was reported by the Ministry of Health (MoH) that the total amount of blood donated annually in Muscat is approximately 25,084 units. MoH further reported that its Department of Blood Services is functioning at full capacity to meet the demands in the Sultanate.

Most blood banks are still running manual systems in its processes. As such, there is a lackof efficiency because it is still paper-based in collecting information about donors, inventories of blood bags, and blood transfusion services. The lack of proper documentation may endanger patients' health due to the possibility of contaminating blood bags. Contamination happens whenthere is an incomplete donors' medical history record and the blood bags' shelf life is not monitored properly. Hence, a web-based blood bank management system might be needed to address these issues and problems encountered to ensure blood transfusion safety.

PROBLEM DEFINITION

Blind people have been facing a lot of problems in navigation, detectingand identifying objects that are necessary for certain kinds of household works or office works. They tend to depend on another person to help them which cannot be always possible. In such situations there can be chance for accidents which are dangerous.

As there are people who get trained in identifying or detecting things, they also need some time in identifying objects. It is not possible to always depend on a person to stay for, and to take care of a blind person. The advancements in technology helps this problem to move a step forward.

EXISTING SYSTEM:

At present, even though there are many donors, there are still patients who are suffering and dead due to unavailability of blood at the correct time. In this system, the patients are provided an organized way of reaching the donors by sending messages to their phones that are in and around their surroundings. In the existing system, when people are in need of blood they will search for NGO'sfor contact information and will try to contact them. They will wait for the donors to reach the destination in required time.

DISADVANTAGES OF EXISTING SYSTEM

1.Donors may or may not reach in time.

2.No proper organization.

3.Info is limited.

4.Not able to access it anytime

PROPOSED SYSTEM:

The proposed system provides all the services online available to all the patients and donors to get their information registered. The

patients are required to provide info of blood type and number of units and destination. The donors who are in and around the destination will get

the message to their phones which requires less time to reach the destination.

ADVANTAGES OF PROPOSED SYSTEM:

1.Easy to access.

2.More information.

3.Accessible to everyone at any time.

4.Donors can reach the destination fastly.

IMPLEMENTATION

The researchers used both descriptive research and experimental research designmethods. The study was descriptive because it describes the nature of the situation as it exists at the time of the study. Also, it was a systematic and scientific approach to research in which the researchers manipulate one or more variables, and control and measure any change in other variables. It involves collection of data in order to test hypotheses or to answer questions concerning the current status of the subject of the study. The study was also experimental becauseit has an assumption of a cause-and-effect relationship, and the researchers introduced an online blood bank management system as intervention that caused the change.In this study, the researchers used questionnaire to collect information and to obtain the perception of the various stakeholders on how they perceive the manual-based system and the online system. The questionnaire was administered to hospital administrators, doctors, and blood bank receptionists. In sampling, the researchers used cluster sampling in which respondents were grouped accordingto their roles and responsibilities.

SAMPLE SCREENS

CONCLUSION

Technology is introducing new innovations day by day, thus reducing the time requiredto do things. The proposed system can be used to reduce the time required to deliver required bloodto 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 an emergency. The database isa vital aspect of the system. The database of the hospitals and the blood banks must be checked for consistency on a 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.

FUTURE SCOPE FOR FURTHER DEVELOPMENT

Since there was a small amount of contact information, it may be difficult for some people to get blood quickly. I would like to gather more information about contacts in other citiesand villages and will provide people with much more support to connect all of us with morality.The specification builds on the experience of users of IT technology in blood transfusion that is currently available and inform both connecting for Health (CfH) and

commercial companies producing both hardware and software. The scope of specification includes:

Routine blood transfusion.

Transfusion for special requirements.

Emergency issue of blood.

Useful for medical digitalisation like recovering previous records of patients. • It can beused to connect various hospitals on one platform.

Management of returned and unused blood units.

The address of donors can be updated automatically from the external device.

GPS technology can be used in this purpose

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