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An Efficient Mode of Communication for Blood Donor

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ABSTRACT

Serious trauma and illness creates a decisive circumstance for millions of lives around the world. To recovery and maintain the patients' health, transfusion of blood and blood products through volunteer non-remunerated donors is the only mode. The hunting process for blood is time-consuming and an impractical job. To have a valuable search of donors and get their help at precise time is achieve through the android smart phone application. The donor details are registered in the database along with the specification of their exact location tracked via a GPS technology. The intimation from the receivers is done through the SMS service or the donors are contacted directly through a call. Hence, a successful android application is designed for optimized search and contact.

KEYWORDS- Android, Volunteer Blood Donation, Global Positing System (GPS).

I. INTRODUCTION

The World Health organization (WHO) hopes for the achievement of 100% non-remunerated volunteer blood donors to ensure the safety and quality of blood which can save millions of lives during the medical and surgical courses. The origin and leading principle of the willing and eligible donors as defined by WHO [1] is the only resource of obtaining such safe blood and blood products at the demand of urgent blood transfusions. The National Blood Policy (NBP) approved by the government of India in April, 2002 [2] is an intention to enlarge a country-wide system to grant volunteers who can be much closer to the natives. Recognizing enthusiastic blood donor and protecting public health can be made possible through the present-day technology, the android smart phones. An application can be create to maintain close contact with the donors and the receivers. According to the universally acknowledged standards of blood donation, the eager donors can be encouraged to reduce the scarcity of blood. With the community support, the application can be used to remove family/replacement or paid blood donors.

II. LITERATURE SURVEY

"**The Optimization of Blood Donor Information and Management System by Technopedia**" by P. Priya *et al.* [3] is an excellent effort on GIS integrated android application to provide the information and management system on blood donors. The computerized management system can be used by the needy to collect the information about the donors at the time of emergency. Though the system has been developed with wireless internet technologies and the storage is facilitated with cloud, there are no boundaries for the mishandling activities.

Narendra Gupta *et al.* [4] proposed the system "**MBB: A Life Saving Application**" which helps the needy with valuable information such as the stock of blood held in each area of the city, the details about the blood donating camps, etc. The interested donors have registered their details in the app which can be used in the time of requirement. The app provides information about the request of the patients who can be immediately attended by the donors.

"An android application for volunteer blood donors" is the system works as an encouraging factor by Sultan Turhan *et al.* [5] to increase the number of volunteer blood donors to join in this national service. By means of this app it is possible for health care centers to have regular intimation of the registered donors' location so that the nearest donors can be identified and fetched immediately during the time of support. The system also checks for the remaining blood stock each time in the nearby blood banks or invokes the living

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contributors. Thus, the optimized android system overcomes the stock insufficiency and donor out- of -reach problems.

In "**An Efficient Android App for Blood Donation Process**", Shek Eahtesam *et al.* [6] designed the system to display the details of the willing donors through the social media methodologies. The hot social mediums such as WhatsApp and Face book are smartly used to communicate the demanding of the blood donors. The android smart phones embedded with these applications can be successfully used by the receiver to notify and contact the donors in urgency. A database is maintained to hold the stock of blood available in the locality and the details of the donors.

The major features of the smart phones explicitly Web Browsers and GPS tracking system are taken in account by "**Android Blood Bank**" by Prof. Snigdha *et al.* [7]. The details of the registered non-remunerated donors and the particulars such as blood camps, banks, nearby hospitals can be viewed once we login the app. The request for the help and medical information and contact details desirable during the crisis can be browsed within the app. The GPS tracking system affords the donors with the information about their present location and the exact path for the nearby blood banks or the hospitals. Thus, the hard-by donors can track through GPS and reach the place abruptly.

III. PROPOSED SYSTEM

At the critical time of saving a life, searching blood in blood banks and hospitals with no accuracy is a time consuming and an irresponsible task. To overcome such problems the proposed system affords an automatic search for volunteer donors store in the database. The development scheme consists of two parts: - **Web application** and **SMS application.** The web application is used for the registration of non- remunerated donors which is saved in the database access only by the Admin. To manage within a legislative and principled framework, the admin can activate a valid donor and inactivate if any exploitation is discovered. The valid donors can login the app to direct their profile details and market themselves as the national treasures. The donors can also create a new group either based on their pertinent blood group or the city or else join the existing groups. This makes the receivers to have more efficient search and can easily figured out the nearest donors by calculating their distance by using the GPS Tracking System. Thus, the neatest donors are apprised through the SMS application about their need or contact directly by a call. The receivers can also explore the details of blood banks and hospitals through this app.

IV. SYSTEM FLOW

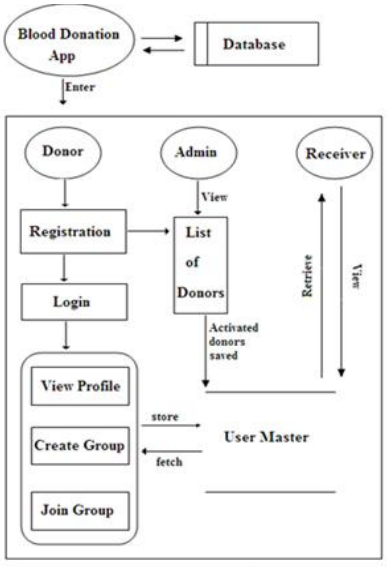

Fig 1. Systematic diagram

The above Fig 1. illustrates the systematic flow of the application.

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V. SYSTEM DEVELOPMENT

The application consists of three major sections namely the Admin, the Donor and the Receiver.

A. ADMIN

The details as soon as registered by the donor are saved in the database as a list of donors which can be managed and accessed only by the Admin. The authentication and the security reside with the admin who has the power of activating or inactivating a donor. If any misbehave or overrule of protocols are indentified, then admin can inactivated a donor. Thus, the authorized donors are the only ones to use the app and receive the request from the seekers.

B. DONOR

Being a primitive user, the volunteers willing to donate blood, register their details thereby creating their own login ids. The details are automatically saved in the database which can be only accessed by the admin to prevent the mishandlings. The donors can login the app to view and revise their profile at any time. The donors here also have the advantage of creating or joining groups. The donor can create their own group or join the existing group based on their city or relevant blood groups. This sort of grouping helps the receivers to have an easy and effective search during the aid.

C. RECEIVER

During the emergency, the receivers can search for their donor either based on the relevant blood group or by the city. Through this application, the receivers are provided with a list of donors who can be located exactly by using the GPS technology. With this assistance, the receivers can contact the nearest donors available for help. Those donors are informed with a SMS service or by contacting them directly through a call. The receivers can also view their neighborhood hospitals and blood banks along with the contact details such as phone number, address, etc.

VI. RESULT AND DISCUSSION

The **Android,** an open source smart phone operating system is a motivation to develop society-determined mission along with **MYSQL,** a relational database management system which can handle multiple users to successfully provide the following results-

Fig 2. Welcome page and the Registration

The illustrated Fig 2 shows the welcome page of the app and the registration form which can be used by a new donor to contribute in the social activity.

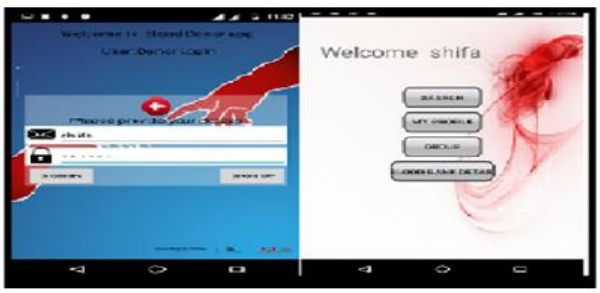

Fig 3. Donor Login and the Details

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After the registration, an user id and passwords are processed for the donor to login into the application. Once the login is successful, the donor can search for the details, view their profile, create or join groups and look for blood bank details as shown in the Fig 3.

Fig 4. Search based on particular blood grup or city

The above Fig 4 explains the search details of the donor and the results obtained through a particular search along with the distance of each donor available through GPS tracking. This optimizes the time and the receivers can fetch the nearest donor during the emergency.

Fig 5. Donor updating profile and Creating or Joining Groups

The facility such as the updating of the donors' profile increases the accuracy of their details. The donors can create their own groups based on their relevant blood group, city, etc. Thus, the grouping aids the receivers to search for the donors more efficiently as in the Fig 5.

Fig 6. Viewing Blood Bank Details and Donor Details

The receiver can also view the blood bank and hospital details as demonstrated in Fig 6. The donors' list can view and accessed only by the admin for security reasons is also displayed.

Fig 7. Admin Login and Donor Activation

The presented Fig 7 is the admin login details and the activation of the donor. The user can act as the donor only after the approval of the admin, thereby reducing any chaos.

VII. CONCLUSION

Thus, a positive image on volunteer blood donation has been created through this proposal. The goal of preventing family/ replacement and paid donors can be achieved by creating awareness among public and motivation for 100% volunteer blood donation. Hence, more modernized and efficient application for the recruitment of eager donors and progressive hunting routine are accomplished.

REFERENCES

[1] Towards 100% Voluntary Blood Donation– A global framework for Action, World Health Organization, 2010.
[2] Voluntary Blood Donation Program- An Operational Guideline, National AIDS Control Organization, Ministry of Health
and Family Welfare, Government Of India, July 2007.
[3] The Optimization of Blood Donor Information and Management System by Technopedia, P.Priya1, V. Saranya2, S. Shabana3, Kavitha
Subramani4, Department of Computer Science and Engineering, Panimalar Engineering College, Chennai, India.
[4] MBB: A Life Saving Application, Narendra Gupta1, Ramakant Gawande2 and Nikhil thengadi3 1, 2, 3 Final Year, CSE Dept., JDIET,
Yavatmal, India.
[5] An android application for volunteer blood donors by Sultan Turhan, Recent Resaerchers in Applied Computer Science, PP. 91-96.
[6] An Efficient Android App for Blood Donation Process, Shek Eahtesam, Shilpa Raaz, IJIET, Vol 7, 2016, PP. 367-369.
[7] Andriod Bllod Bank, Prof. Snigha, Varsha Anabhavane, Pratiksha Lokhande, Siddhi Kasar, Pranita More, India, IJARCCE, Vol 4, Nov
2015, PP. 86-88.