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The Implementation of Online Blood Donation System

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Abstract: The main objective of this project is to provide the platform for users to help others through donation system. Finding blood donor is a challenging issue in almost every country. There are some blood donor finder applications in the market such as Blood app by Red Cross and Blood Donor Finder application by Neology. However, more reliable applications that meet the needs of users are prompted.
In order to solve this problem, we want to develop a web-based application that will provide a platform to the people to donate their blood, leftovers. This platform will be of great advantage to people lives and people can also join us as volunteers who can donate blood, Blood in their neighborhood. This system will create a common collaboration portal for blood banks, and NGO's.
Keywords- NGO, Web Based Application, Blood Donation, leftovers, Volunteer, Education.

1. INTRODUCTION

Donation systems play a crucial role in society by providing support and assistance to those in need. Conventionally, when a patient needs blood, they have to contact a blood bank or a compatible blood group of a donor in their circle, family, and friends. However, it is difficult to find suitable donor within a limited group of people in a given time. In addition, there is no guarantee that blood banks will have compatible blood group in stock. There is also steady increase in blood donation request posts in social networking sites (WhatsApp, Facebook, Twitter, Instagram, etc.) requesting for donation.
Through this application we are going to distribute leftovers, clothes and books of the middle class and rich people to the poor people who need this Blood to fill their empty stomach and clothes to wear along with books to educate themselves. We will tie-up with some NGOs who will provide us details about these people and then first they will collect this Blood and then distribute it to the poor people who don't need taste in the Blood and just want to feed themselves in order to get the energy to survive. Donation systems have many benefits for both the donors and the recipients. For the donors, donating can provide a sense of purpose and fulfilment, as well as an opportunity to give back to their communities.

2. LITERATURE SURVEY

We used the literature review to generate pertinent ideas that could be further refined. I also engagedin critical reflection on these ideas in order to evaluate their origins, meaning and status in the research. During the cause of the study, I continuously returned to the literature review to update it, refine it, and add new information and observations.

This paper focuses on donation system. The main objective of this project is to design and

develop platform for users and doners for the help of each other. Mission of this project is to end hunger and no wasting of Blood to make a hungry-free world, no people would die just because of not finding blood on time and no students education gets affected due to not able to purchasing many educational stationary things like books, bags, pens etc.

3. PROPOSED SYSTEM

A web-based donation system is a digital platform that allows donors to donate blood. These systems are becoming increasingly popular as they provide a convenient and accessible way for people to donate from anywhere, at any time.

3.1 Web-based blood donation systems.

1. **Online Blood Donation Platforms:** These platforms allow people to register as blood donors, search for blood availability. Donors can also update their personal information and donation history on the platform. These platforms are particularly useful during emergencies when there is an urgent need for blood.
2. **Donor Management Systems:** These systems are used by blood donation centers to manage the entire process of blood donation, from registration to donation to post-donation care. They help streamline the process of collecting and managing blood donations, ensuring that blood products are safe and high-quality.

4. DESIGN & IMPLEMENTATION

4.1 IMPLEMENTATION OF E-PORTAL

1) UI Design-: This phase consists of the user interface through which people other than admin are going to interact with the admin using the application.

2) System Design -: The system is divided into three modules which are Admin, Volunteer, and User.

3) Database Design-: This phase consists of all the login id details of user, volunteer and all the other data that needs to be stored. Database is a necessary component of any application as it is used to store the all the data.

4.2 CONTEXT DIAGRAM

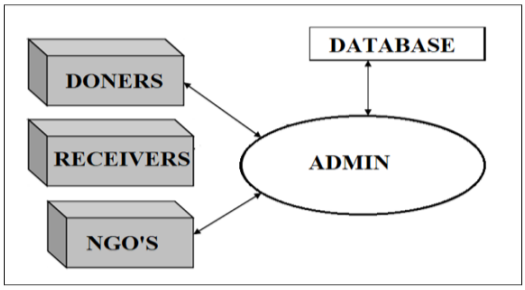

Fig 4.2: Context Diagram

4.3 DATA FLOW DIAGRAM

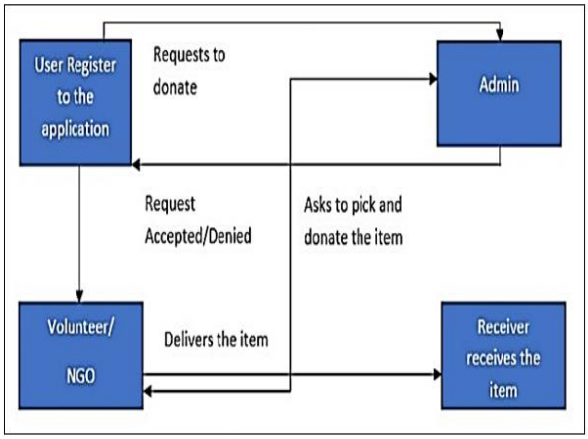

Fig 4.3: Data Flow Diagram

5. WORKING OF PROJECT MODULE

This project includes following modules is listed below:

1) **Admin**: Admin will be responsible for accepting and denying all the request regarding donation. When someone will post a request for donation than admin can accept the donation request and grant it to a volunteer or NGO, or admin can cancel the request according to then circumstance.

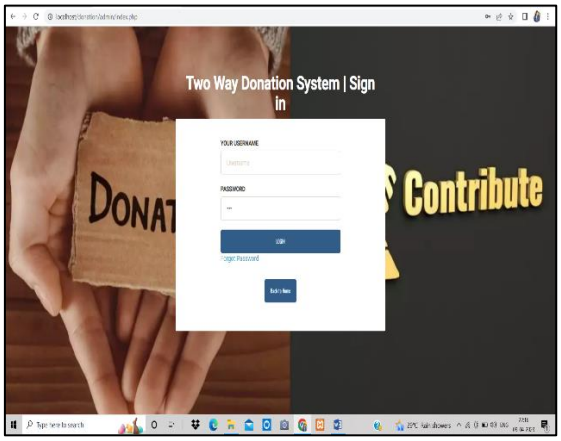

Fig 5.1: Admin Page

2) Donor Side:

1: User can register using personal details.
2: User can login in their personal account using id and password.
3 (a): Create a new Blood item with details of quantity, location, address contact if registered under general/Blood category.

3 (b): Create a new blood sample item with details of blood group, location, address contact number if registered under emergency or blood category.
4: Add multiple Blood items to cart for booking.
5: After adding details about Blood/blood, user can logout the system.

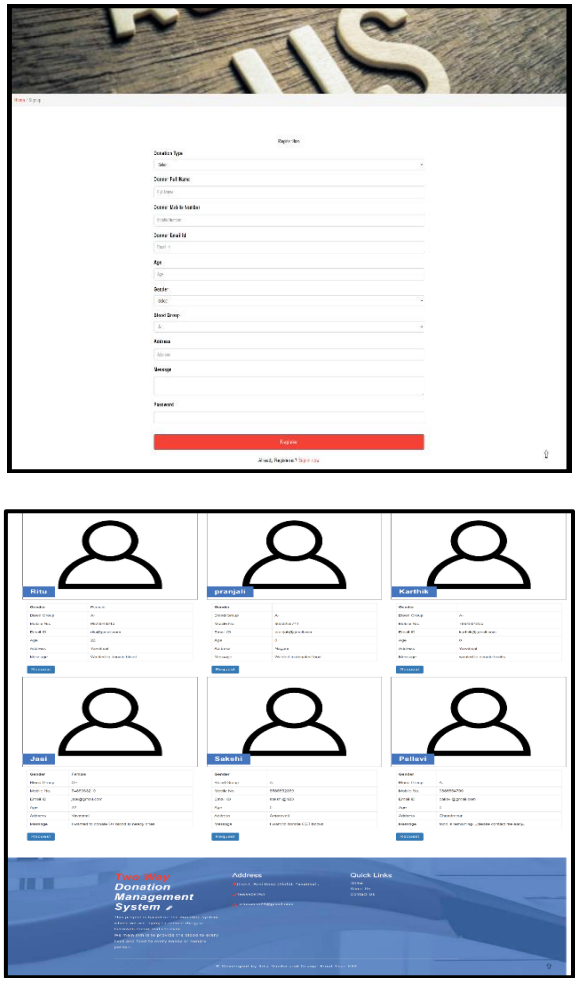

Fig 5.2: Donor Side Page

3) User side :

1: User can register using personal details.
2: User can login in their personal account using id and password.
3: Search location wise and book the Blood items with time.
4: After accepting the request from donor side
5: After accepting the Blood or receiving the blood volunteer will give feedback about Blood taste and quality of blood samples.
6: Volunteer can logout the system.

Fig 5.3: User Side Page

6. ADVANTAGES OF SYSTEM:

1. Easy accessibility: A web-based system allows donors to access the donation platform from anywhere with an internet connection. This makes it easier for people to donate, regardless of their location.
2. Faster response time: The online platform allows for immediate communication between donors and the organization, which results in a quicker response time. This can be particularly important in emergency situations where time is of the essence.
3. Increased donor engagement: A web-based system can provide donors with more information about the organization and its mission, which can increase donor engagement and motivation to give.
4. Help to save people lives by timely providing blood supply support
5. Keep track of waste Blood for restaurant.
6. User can play character in saving Blood wastage and help the needy.
7. You can gift Blood from home easily and also help to educate children by providing educational things and clothes.

7. LIMITATIONS

1. Wrong inputs will affect the project outputs.
2. Internet connection is mandatory.
3. The android mobile user will not be able to insert or view details if the server goes down.

8. CONCLUSION

In this paper, we have proposed the design and implementation system of new transform way of charity and donation with a single form of application. This application has a wide scope in future as India is a developing country which consist of rich as well as poor people. This blood and Blood donation Application can be developed to further improve user accessibility via integrating this application with various social networks application program interfaces (APIs).

Consequently, users can login and sign up using various social networks. This would increase number of donors and enhances the process of blood and wastage donation.

If this donation business will be put online than people can donate their extra stuff without any discomfort and those who

really need this stuff can have these items. Moreover, this application will be of great use in case of a natural calamity like an epidemic break where people would be able to donate Blood and clothes in time of need to their fellow citizens of India. Many Bloods are wasted in celebrations like a wedding or a party just because nobody wants to spend their time in finding people for donating their Blood…So our application will ease their work as they don't have to take do anything but just register to this application and someone will pick up the items they want to donate from their doorstep.

This application can bring a great revolution in solving the Blood crisis problem of India.

9. FUTURE DEVELOPMENT SCOPE

There is scope for future development of this project. The computer technology keeps finding new methods and technologies on a day-to-day basis. User interface (UI) can be improved in future to accommodate global audience by supporting different languages across countries. Data scraping can be done from different social networks and can be shown in the Blood Request and wastage Feeds. Appointments can be synchronized with Google and Outlook calendars for the ease of users. The skills which is prominent today will become obsolete in a few days. To keep in pace with the technical developments, the system may be additionally improved. So, it is not concluded. Yet it will improve with further augmentations. Augmentations can be done in an effectual manner. We can even apprise the same with further changes and can be integrated with minimal alteration. Thus, the project is flexible and can be improved at any time with more progressive features.

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