



International Journal for Innovative Engineering and Management Research

A Peer Reviewed Open Access International Journal

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IJIEMR Transactions, online available on 24th Dec 2022. Link

[:http://www.ijiemr.org/downloads.php?vol=Volume-11&issue=Issue 12](http://www.ijiemr.org/downloads.php?vol=Volume-11&issue=Issue 12)

DOI: 10.48047/IJIEMR/V11/ISSUE 12/40

Title **Blood Donation & Management System- A Review**

Volume 11, ISSUE 12, Pages: 292-297

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Blood Donation & Management System- A Review

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ABSTRACT

With rapid increase in the usage of social networks sites across the world, there is also a steady increase in blood donation requests as being noticed in the number of posts on these sites such as Facebook and twitter seeking blood donors. 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. Also the sharp increase in the amount of wastage in terms of food makes the need for donation in terms of donation. In today's world, large amount of food is being wasted on a regular basis in our homes, Hotels weddings and parties and many other places. Many people donate food, clothes and books etc. manually by visiting different places on their own in order to solve this crisis of hunger as well as food wastage in our country. 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 along with books and clothes, also the people who are in need of a meal will get something to fill their empty stomach. This platform will be of great advantage to people lives and avoid any kind of food wastage and people can also join us as volunteers who can donate blood, food in their neighborhood. This system will create a common collaboration portal for blood banks, hotels/restaurants and NGO's. any individual or an organization trying to donate food through this application will create a new request to the admin and the admin will grant the request whenever it can.

Keywords: Web Based Application, Blood Donation, Food Donation, Cloths and Books donation, Admin, NGO, Volunteer, User

INTRODUCTION

Conventionally, when a patient needs blood, he/she has 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 requests posts in social networking sites (like WhatsApp, Facebook, twitter, Instagram, etc.) requesting for donation.

This application is going to help poor people of India as 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 food 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 food and then distribute it to the poor people who don't need taste in the food and just want to feed themselves in order to get the energy to survive. With

approximately 195 million underweight people, India contributes one-fourth of the global hunger burden. Nearly 47 million or 4 out of 10 children in India are not meeting their full human potential because of chronic undernutrition or stunting. Stunting has consequences such as diminished learning capacity, poor school performance, reduced earnings and increased risks of chronic diseases. The impacts are multi-generational as malnourished girls and women often give birth to low birth-weight infants.

There has also been an increase in the prevalence of overweight and obesity in children and adolescents in India, which has life-long consequences of non-communicable diseases in adulthood. The government has huge food security and anti-famine programmed but there are demanding gaps in terms of involvement and omission failures. Women and girls are particularly handicaps. Although the achievement of national food autonomy, new challenges have appeared: Decelerate agriculture growth, climate change, land deterioration, and declining biodiversity. Large sections of farmlands in India have become desolate due to overloaded fertilizer use and extreme use of a single fertilizer, urea. With a five-fold increase in food grain manufacture from 50 million tons in 1950-51 to about 250 million tons in 2014-15, India has moved away from dependency on food aid to become a net food retailer. In 2016, the government launched a number of set-ups to double farmers' incomes by 2022.

LITERATURE SURVEY

1. In literature survey some of the projects are explained. All these projects are on blood bank management
2. systems means how to manage blood banks how can a recipient can access to

blood more easily than previous old traditional methods.

3. Many peoples try to improve blood bank working in their own ways and these are some them.

- a. In "Short message service (SMS) based blood bank" by G. Muddu Krishna & S. Nagaraju(2016)[1]. They proposed a system in which services of blood bank will be accessed via SMS. If someone needed blood then.

OBJECTIVES

1. Voluntary blood donation is perhaps one of the most perfect examples of altruism in action. The objective of collecting blood through voluntary blood donation are:
2. Provide safe and quality blood and blood components collected from voluntary donors, round the clock, at affordable cost to the general public and free of cost to the poor.
3. Ensure safety and quality of blood.
4. Motivate and maintain a permanent well-indexed record of voluntary blood donors.
5. Educating the community on the beneficial aspects of blood donation and harmful effect of collecting blood from paid donors.

1. PROPOSED METHODOLOGY:

The proposed system is developed to overcome the disadvantages of the existing system specified earlier. Blood application can resolve these issues by connecting patients promptly with a large pool of donors in the same region via an authorized clinic.

This proposed system is a web-based application which provides a platform to the people for donating their blood and left-over food along with books and clothes to all the people who are in need of these items. Through this

application people can effectively donate blood, food (left-overs) and stuff from their homes or workplace conveniently through internet. India is a highly populated country where a lot of food is wasted in marriages, parties, family get-togethers and even in their day to day life whereas some people don't even get a single meal in a whole day. So, with the help of this application leftovers along with books and clothes can be donated to many organizations like orphanages, schools and institutions, beggars or to the people who need these things. This system basically consists of three modules which are admin, volunteer, user. User and volunteer would be registered to the application and admin has access to all their data and will be responsible for accepting and denying the requests, can give approval for login and approval to volunteer for picking the item from donator's place and then volunteer/NGO can donate the item.

When a patient needs a blood donation, the clinic (where the patient is admitted) can use the application to contact the blood donors in the vicinity or nearby city based on their location. The registered donors will get notification about the blood donation needed at a specific clinic where they can go and donate.

2. IMPLEMENTATION :

2.1 Project is divided into following three section-:

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. The technology used for designing the front end of the applications are **html5, CSS3, bootstrap, jQuery, JavaScript.**

- 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. It will store the data like how much item is donated by which user, the date and time of donation etc. in the forms of tables. The technology used to create database is Workbench, MySQL, and we will connect the **MYSQL database with backend language using PHP.**

Project Module :-

This project includes five modules and 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 circumstances.

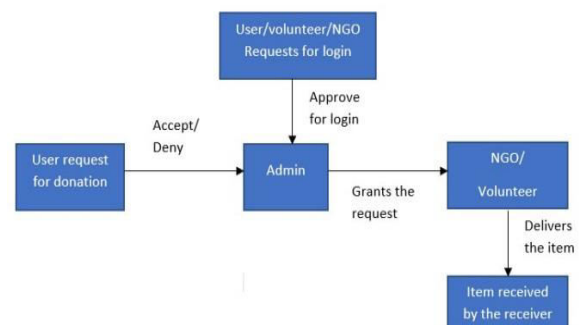


Fig :- 1 Admin

2. Donor Side:

Step 1: User can register using personal details.

Step2: User can login in his personal account using id and password.

Step 3 (a): Create a new food item with details of quantity, location, address contact if registered under general/food

category.

Step 3 (b): Create a new blood sample item with details of blood group, location, address contact number if registered under emergency or blood category.

Step 4: Add images of food/ blood donation to the donation system and

Step 5: Add multiple food items to cart for booking.

Step 6: After adding details about food/blood, user can logout the system.

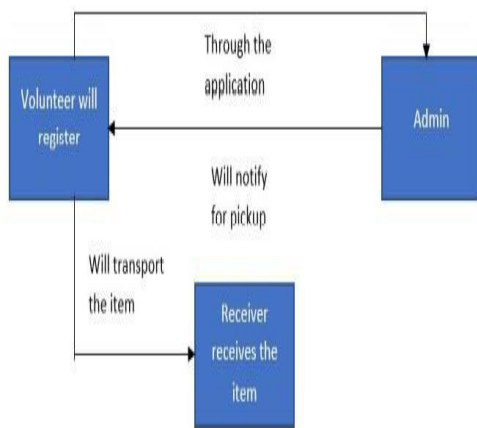


Fig:- 1.1 Donor Side

3. User side:

Step 1: User can register using personal details.

Step 2: User can login in his personal account using id and password.

Step 3: Search location wise and book the food items with time.

Step 4: After accepting the request from donor side

Step 5: After accepting the food or receiving the blood volunteer will give feedback about food taste and quality of blood samples.

Step 6: Volunteer can logout the system.

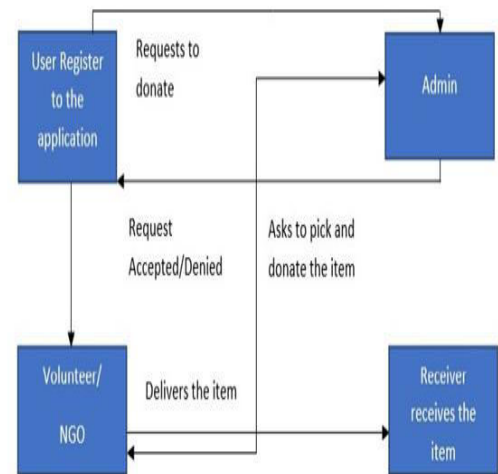


Fig :- 1.2 User Side

• DATA FLOW DIAGRAM

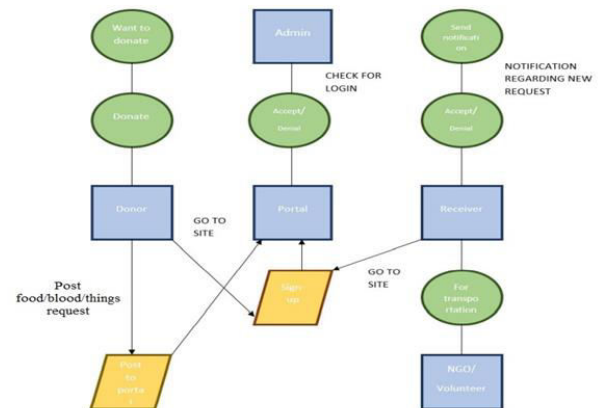


Fig.2 Blok diagram of blood donation & Management system

SOFTWARE & HARDWARE REQUIREMENT

- Front End :- PHP
- Server Side Language :- HTML, JavaScript, CSS
- Back End :- MySQL

➤ Software Requirement

XAAMP Server
Notepad++ Or any other editor

➤ Hardware Requirement

Memory of 4GB RAM Or

More

Monitor Resolution of 1024 x 768 or Higher

Intel Pentium 4 or AMD Athlon 2GHz (or faster)

1 GB (or more) available hard disk space

ADVANTAGES & DISADVANTAGES

ADVANTAGES

1. Help to save people lives by timely providing blood supply support
2. Advantage will be both the restaurant (reducing food wastage), and the needy to feel hunger.
3. Keep track of waste food for restaurant.
4. User can play character in saving food wastage and help the needy.
5. You can gift food from home easily and also help to educate children by providing educational things and clothes.
6. Easy to used and user friendly.
7. Food waste will be reduced.

DISADVANTAGES

1. Screening donors for existing health conditions
2. Using new needles for each donation
3. Having professional staff on hand
4. Providing monitoring and refreshments to ensure a safe recovery

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 food 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.

In world, Some people have access to a lot of things whereas some people can't even afford a basic lifestyle. 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 food and clothes in time of need to their fellow citizens of India. Hundreds of thousands of food is wasted in celebrations like a wedding or a party just because nobody wants to spend their time in finding people for donating their food 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 food crisis problem of India

FUTURE 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 anytime with more progressive features.

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