

BLOOD BANK MANAGEMENT SYSTEM

A Report for the Evaluation 3 of Project 1

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report**“BLOOD BANK MANAGEMENT SYSTEM”**..... is the
bonafide work of **“SACHIN KUMAR (1713111008)”** who carried out the project work
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1. ABSTRACT

This project is aimed to developing an online Blood Donation Information System. The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The website is designed to handle the daily transactions of the blood bank and search the details when required.

There are number of scenarios where urgent need of blood comes. At these critical time, On-line Blood Bank project aims at maintaining all the information related to blood donors. The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself. In the same way if any organization wants to register itself with this site that can also register.

The number of persons who are in need of blood are increasing in large number day by day. In order to help people who are in need of blood, my Online Blood Bank can be used effectively for getting the details of blood donors having the same blood group and within the same city. With the help of my Online Blood Bank people who are having the thought of donating blood gets registered in my Online Blood Bank giving his total details.

My Online Blood Bank website is available to everyone easily. A person who likes to donate blood gives his entire details i.e., fill in the registration form and can create a username with a password by which he can modify his details if at all there are any changes in his information given before.

My site also helps people who are in need of blood by giving the details of the donors by searching, if at all there are no donors having the same group and within their own city they will be given the addresses with phone numbers of some contact persons in major cities who represent a club or an organization with free of cost. If at all the people find any difficulty in getting blood from the contact persons we will give them a another contact information i.e., India's Largest Paging Service number through which they can give the message on every ones pagers with the blood group and city they are living in, such that the donors who view the messages in their pagers having the same blood group and the in the same city, he contacts the person on phone who are in need of a blood. Such that the person gets help from us which saves his life.

The present project elucidates the following features:-

- Registering the Donors
- Modification of Donor Information
- Searching a Donor
- Life Saving Contacts (in major cities)
- Paging Services

2. INTRODUCTION

The BLOOD BANK MANAGEMENT SYSTEM is great project. this project is designed for successful completion of project on blood bank management system. the basic building aim is to provide blood donation service to the city recently. Blood Bank Management System (BBMS) is a browser based system that is designed to store, process, retrieve and analyze information concerned with the administrative and inventory management within a blood bank. This project aims at maintaining all the information pertaining to blood donors, different blood groups available in each blood bank and help them manage in a better way. Aim is to provide transparency in this field, make the process of obtaining blood from a blood bank hassle free and corruption free and make the system of blood bank management effective.

The *Blood bank system project report* contain information related to blood like

- Blood type
- Date of Donation of blood
- validity of Blood s
- Available Blood group

(i) Overall Description

Objective

The main objective of this application is to automate the complete operations of the blood bank. They need maintain hundreds of thousands of records. Also searching should be very faster so they can find required details instantly.

To develop a web-based portal to facilitate the co-ordination between supply and demand of blood . This system makes conveniently available good quality, safe blood and other blood components, which can be provided in a sound, ethical and acceptable manner, consistent with the long-term well being of the community. It actively encourage voluntary blood donation, motivate and maintain a well-indexed record of blood donors and educate the community on the benefits of blood donation. This will also serve as the site for interaction of best practices in

reducing unnecessary utilization of blood and help the state work more efficiently towards self-sufficiency in blood.

The system will provide the user the option to look at the details of the existing Donor List, Blood Group and to add a new Donor. It also allows the user to modify the record. The administrator can alter all the system data.

(ii) PURPOSE

Need of Blood Bank Management System

Bank blood donation system in java is planned to collect blood from many donators in short from various sources and distribute that blood to needy people who require blood. To do all this we require high quality software to manage those jobs. The government spending lot of money to develop high quality “Blood Bank management system project”. For do all those kinds of need blood bank management system project in java contain modules which are include the detail of following areas:

- Blood Donor
- Equipment's
- Stick
- Blood Recipient
- Blood collection
- Camp
- Stock details
- blood bank system project Reports
- Blood issued
- Blood bank system project

Features:

1) Blood Camp Management And Reporting

- Provides recording of details of camp beginning from allocation of staff, details of facilities available in the camp venue.
- Provides assigning of donor to a particular camp and generate camp organizer report
- Automated report generation of camp details for submission to the Government
- Donor Management
- The system allows automatic component data generation based on the component selected in the blood donor form.
- The system allows bulk update for serology for blood units. Serology result for many donors can be updated at once.
- The system allows for either component creation before serology test or vice versa.
 - Based on the serology test, the component created are updated automatically
- The system allows bar-coded blood bag number entry
- All donor related reports are excel downloadable
- All Reports provides filtering over many factors like Blood Group, gender, area, blood Camp, date of donation, donor type etc.
- The system provides easy link for easy edit or adding details for various sections of the donor form.

1.2) Donor Test Results Management and Adverse Reaction Data Management

- Provides filterable selections for donor selections
- The reports are highly configurable and can be configured to display data requirements.
- Search based on Component ID, Donor Registration ID, Donor Blood Bank Number and Donor Name
 - a) The results displayed in search is highly configurable
- The search functionality also allows for site-wide search. It means a user can search for any data available in the system

- Custom links can be added in the search results to allow easier navigation and accessibility
- Blood Components Management
- Automatic generation of components form donor form
- Based on the date of collection, the system automatically derives the date of expiry and disallows issue of component if unit has expired
- Until the serology test is done, the system marks the status of the the component as test awaited. And only after serology test is done, the component is marked for Ready for Issue
- The Available components list is available and the system automatically generates the list of components that are ready for issue to be available.
- Captures patient personal information as well as the hospital where blood is required)
- The system allows for reserving a unit for 24 hours for a patient)
- The blood component issued, the payment made as well as link to the final bill is available when the patient page is opened
- The data allows reports like: Issue Register, Reserved Units and Patient Inventory Liste)
- The system allows for capturing transfusion reaction data
- Blood Issue and Billing
- Ability to provide adjustments in the final payment receipt for concession for blood unit
- The system prevents blood issue if cross-match is not done or fails
- Final bill gets generated only if only the payment has been accounted for
- Final bill gets generated only component selected has been serology tested and is ready for issue
- Auto-generated final receipt
- Auto-generated Cross-matching report
- Managing Practical Solutions For Blood Bank Management

- The system allows components to be created before serology and vice-versa.
- The system takes care to automatically update the components when serology is done.

3. EXISTING SYSTEM

The system we present here is adequate for searching blood donors for available blood and thereby saving valuable time and money. This application provides necessary options to serve people on their emergency need making them free from worrying for blood by providing lot of donors at a single click. The options that are provided by this application are:

- Donor registration and blood collection
- Blood requisition/issue
- Discard accounting
- User access control
- Detailed donor database
- Maintain and update unique donor identification
- Search facilities by donor, patient, doctor, blood bag, and other recognizing factors
- Correlation and cross referencing between files
- Powerful search for donors by blood group, sex, location, telephone number.
- Exhaustive report formats and registers
- Interface with grouping and testing machine
- Sends various auto-SMS for alerting donor and
- reminding location and time
- Adequate security to protect users' potential information

Besides these, there are ample scopes to improve this application. Some more features can be added to establish this application for a social networking application. Blood Donation Management System is a web enabled and mobile-based application to maintain day to day transactions in a blood bank. This application is to create an e-Information about the donor and organization that are related to donating the blood. This software help to register all the donors, Blood collection details, blood issued details etc. When registration is completed, a user

becomes a donor who will be able to open an account providing fundamental information with email ID and Password. They can modify their account information by updating username, Facebook ID, mobile number and profile picture. If donors are eager to donate blood they can confirm the system. They can remove their account from the system if they wish for. In this application, Admin is the main authority who can add, delete, and modify information if required. A user is able to search donor from the home page. This application provides search facilities by donor, patient, doctor, blood bag, and other recognizable factors. A dynamic search will show donor information by nearest place and blood donation expire date. It will make easier to find and contact with donors when needed. There is adding on facility of printing available as an option. Interface with grouping and testing machine provides user friendly communication. This application sends various auto-SMS for alerting donor and reminding location and time.

Donor can send or receive message within this system. This system will automatically alert a donor before 24

hours of donating blood reminding the location and time by sending message when he/she is again eligible for

donating blood after his/her previous donating. Donor can use this application through android based mobile

phone. Donors login into the system with their e-mail Id and password. It allows donor to search others by

location, blood group. They can get other donors details information. If they want to contact with donor, they can directly call to available donors. We can say in short that Blood Bank and Donation

Management System is an online centralized web portal which helps blood banks, hospitals and any other users to look for donors in their nearby area who will be available in quick time. This system helps the admin to check the database when he wants and it is very flexible for the hospital management, blood banks and any users to retrieve the data when they want and they

can have the data according to the query given by the user from one particular date to another by the query given by admin.

There are three systems that have been selected as benchmark for the development of Blood Bank Management System. They are the Blood Bank India (BBI) at <http://www.bloodbankindia.net>, Lions Blood Bank & Research Foundation (LBBRF) from <http://www.lionsbloodbank.net/> and a previous BBMS standalone version. The website for Blood Bank India is a website that provides the facility for the donor to register by him or herself as a blood donor. Only citizen in India can register to the system. It also provides a feature where a person or hospital can request the blood bag or blood stock from the Blood Bank India. LBBRF is a private organization that functions as a place to donate blood. They give a charge to the person or patient that is in needs of blood. However, the money that they collected is not for the profit for them but for recover the expenses incurred in recruiting and educating donors. This is also to ensure that the blood transfusion is as safe as possible. In Lions Bank & Research Foundation, They will make sure the availability of blood stock in their blood bank. They also published the current status of blood stock in their website homepage. This is for them to keep the website visitor especially donor informed about the needs of blood. They also inform the donor and the public where and when is their next event. However, this blood bank does not provide any facility for the donor and the patient. Therefore, they cannot know how many times that they have donated their blood. As for the donor, they cannot know their blood screening result for each time they donate their blood. Without having this function in the system, the donor cannot monitor his or her health condition. This will make the donor become unaware of their health condition.



4. Existing System

- Cannot Upload and Download the latest updates.
- No use of Web Services and Remoting.

- Risk of mismanagement and of data when the project is under development.
- Less Security.
- No proper coordination between different Applications and Users.
- Fewer Users – Friendly

Disadvantages

1. User friendliness is provided in the application with various controls.
2. The system makes the overall project management much easier and flexible.
3. Readily upload the latest updates, allows user to download the alerts by clicking the URL.
4. There is no risk of data mismanagement at any level while the project development is under process.
5. It provides high level of security with different level of authentication.

4. PROPOSED SYSTEM

To debug the existing system, remove procedures those cause data redundancy, make navigational sequence proper. To provide information about audits on different level and also to reflect the current work status depending on organization/auditor or date. To build strong password mechanism.

Advantages:

- User friendliness I provided in the application with various controls.
- The system makes the overall project management much easier and flexible.
- Readily upload the latest updates ,allows user to download the alerts by clicking the url.

- It provides high level of security with different level of authentication.

Preliminary investigation examine project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

- Technical Feasibility
- Operation Feasibility
- Economical Feasibility

4.1 Technical Feasibility

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Do the proposed equipment's have the technical capacity to hold the data required to use the new system?
- Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface for audit workflow at NIC-CSD. Thus it provides an easy access to the users.

The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security.

The software and hardware requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

4.2. Operational Feasibility

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following:

-
- Is there sufficient support for the management from the users?
- Will the system be used and work properly if it is being developed and implemented?
- Will there be any resistance from the user that will undermine the possible application benefits?

This system is targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements have been taken into consideration. So there is no question of resistance from the users that can undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

4.3. Economic Feasibility

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economic feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

The system is economically feasible. It does not require any addition hardware or software. Since the interface for this system is developed using the existing resources and technologies available at NIC, There is nominal expenditure and economical feasibility for certain.

5. IMPLEMENTATION

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6. OUTPUT

1) Donar Registration Page

The screenshot shows the 'Donor Registration' page. At the top, there is a red header with the 'Life Saver' logo and the tagline 'SAVE LIFE'. Below the header is a navigation menu with links: Home, Donor Registration, Send Request, View Request, Camps, Log In, Search, Contact Us, and About. The main content area features a central form titled 'Donor Registration'. On the left side of the form, there is a vertical banner that reads 'I WANT TO BECOME A DONOR'. The form fields include: Donor Name (text input), Gender (radio buttons for Male and Female), Age (text input), Mobile No (text input), Blood Group (dropdown menu), E-Mail (text input), Password (text input), Confirm Password (text input), and Upload Pic (text input with a 'Browse...' button). A red 'Register' button is located at the bottom of the form. At the bottom of the page, there is a footer with a navigation menu: Home, Donor, Log In, About, Contact Us, and a copyright notice: '© All Rights Reserved | Design by Mr. Shafiq'.

2) Blood Request Page

The screenshot shows the 'Requests For Blood' page. At the top, there is a red header with the 'Life Saver' logo and the tagline 'SAVE LIFE'. Below the header is a navigation menu with links: Home, Donor Registration, Send Request, View Request, Camps, Log In, Search, Contact Us, and About. The main content area features a central form titled 'Requests For Blood'. The form fields include: Name (text input), Gender (radio buttons for Male and Female), Age (text input), Mobile No (text input), Select Blood Group (dropdown menu), E-Mail (text input), Till Required Date (calendar input showing JAN 1), and Detail (text area). A red 'Submit' button is located at the bottom of the form. At the bottom of the page, there is a footer with a navigation menu: Home, Donor, Log In, About, Contact Us, and a copyright notice: '© All Rights Reserved'. The browser's address bar shows the URL: 'localhost/project%201/Blood%20Bank%20Management%20System-1569135150/BloodBank/requests.php'.

3) BLOOD REQUEST LISTS

Life Saver
SAVE LIFE

Home Donor Registration Send Request View Request Camps Log In Search Contact Us About

Requests For Blood

Blood Group	Name	Gender	Contact No	Mobile No	Email	Till Required Date
7	balwant singh	male	22	8427420298	balwant11@gmail.com	19
8	japleen	female	22	9216291294	jsimran08@gmail.com	13
9	Naresh	female	21	8427420291	nareshheer719@gmail.com	17
10	Taran	male	55	7589325050	taran@gmail.com	14

Home Donor Log In About Contact Us © All Rights Reserved

4) Blood Group Search Page (under construction)

Life Saver
SAVE LIFE

BLOOD BANK MANAGEMENT Home
Donor Registration
Request Blood
View Request
Camps
log in
Search
Contact Us
About

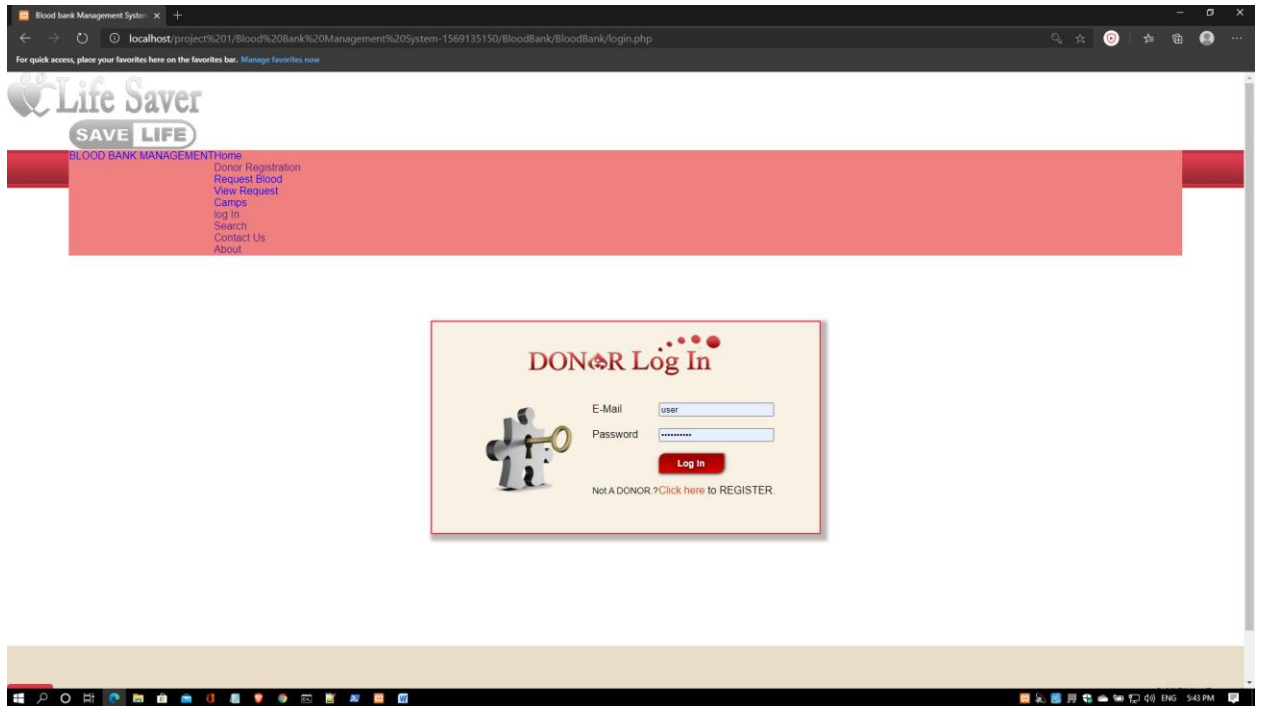
Search

Select Blood Group

Search

Home Donor log In About Contact Us © All Rights Reserved

5) USER LOGIN/ADMIN LOGIN



7. REFERENCES

- [1] <https://web.ku.ac.th/saranaroo/chap5a.htm>
- [2] <https://www.redcross.or.th/forum/16095>
- [3] www.lionsbloodbank.net
- [4] www.google.com
- [5] Php.net
- [6] W3school.com

Other studies:

<https://www.blood.co.uk/the-donation-process/further-information/tests-we-carry-out/>

<http://www.redcrossblood.org/donating-blood/donation-faqs>

<http://www.redcrossblood.org/learn-about-blood/blood-types>

<http://www.nhs.uk/Conditions/Blood-groups/Pages/Introduction.aspx>

<http://www.webmd.com/a-to-z-guides/blood-type-test#1>

https://en.wikipedia.org/wiki/Blood_type

https://en.wikipedia.org/wiki/Rh_blood_group_system

<http://www.mayoclinic.org/tests-procedures/rh-factor/basics/definition/prc-20013476>

http://anthro.palomar.edu/blood/ABO_system.htm

<http://www.redcrossblood.org/learn-about-blood/blood-testing>

<http://www.donateblood.com.au/eligibility/blood-testing-and-safety>

