

Project Report File on
“Blood bank”

CS1119 Web application development

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Chapter 1:

Introduction

Every year our nation requires about 4 Cr. units of blood, out of which only 5 Lakh units of blood are available. It is not that, people do not want to donate blood. Often they are unaware of the need and also they do not have a proper facility to enquire about it. As a result, needy people end up going through a lot of pain.

India has many blood banks, all functioning in a decentralized fashion. In the current system, individual hospitals have their own blood banks and there is no interaction between blood banks.

The management is ad-hoc with no appearance of a proper organization or standard operating procedures.

Donors cannot access blood from blood banks other than the bank where they have donated blood. In the present system, all the blood banks are attached to hospitals and there is no stand-alone blood bank. Some hospital has their own systems and limitations. Because of the low number of donors and more blood banks, the efficiency and quality of blood banks are low, resulting in the wastage of blood and blood components. So this website working prototype to solve all these problems to some extent but still we will directly supply blood from the hospital, it will be a common an organization as a blood bank which will drastically reduce the chances of no availability of blood and also reduce the waiting time for blood.

Chapter 2:

Objectives

The main objective of the blood bank management system is to manage the details of blood, Donor, Blood group, and stock. It manages all the information about blood, customers, and whoever wants to organize a blood camp, providing blood at an affordable cost, reducing overall time and hecticness for both hospitals and patients, and making this whole blood bank system centralized.

This project has the following features:

1. The blood bank website manages all data efficiently.
2. It saves us time as the patient doesn't need to go anywhere.
3. Blood issue and billing.
4. Automates and computerizes the almost whole blood bank system and depository.
5. Donor Management - Donor Registration, Managing donor database, recording their physical and medical statistics.
6. Ensure safety and quality of blood.
7. It will help to educate and aware the community that why should they donate blood and the disadvantages of getting blood from private blood sellers.

Chapter 3: Technology used:

1. Xampp (for local hosting)

XAMPP is a free and open-source cross-platform web server. XAMPP is simply a local host or server that is used to test clients or websites before publishing them to a remote web server. The XAMPP server software on a local computer provides an appropriate environment for testing MYSQL, PHP, Apache, and Perl projects.

2. WordPress (For website building and editing)

WordPress is a content management system (CMS) that allows you to host and build websites. WordPress contains plugin architecture and a template system, so you can customize any website to fit your business, blog, portfolio, or online store.

3. Cascading style sheet (CSS) (for better appearance of the website)

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.

4. Javascript(JS) (to make our project dynamic and interactive)

Javascript is used by programmers across the world to create dynamic and interactive web content like applications and browsers. JavaScript is so popular that it's the most used programming language in the world, used as a client-side programming language by 97.0% of all websites.

5. PHP MySQL (to create a database for the website)

MySQL is a Relational Database Management System (RDBMS) that uses Structured Query Language (SQL).

It is also free and open source. The combination of PHP and MySQL gives unmet options to create just about any kind of website – from a small contact form to a large corporate portal.

Constraints

1. The user interface is only in English, i.e., no other language option is available.
2. Only Admin can Interact with User, there is no two-way Communication as such Included at present.
3. For purchasing any product, the users should be registered and should be able to use log in & passwords for gaining access to the system.

Chapter 4:

ER model

What is er-model?

: ER model stands for the Entity-Relationship Model in the database management system (DBMS). It is the first step of designing to give the flow for a concept and is the DFD (Data Flow Diagram)

Our Project's ER Model:-

The entity-relation data model is based on a reception of the real world that consist of a collection of basic objects called entities and of relationship among these objects. An entity is an object that exists in database administration, an entity can be a single thing, person, place, or object. Data can be stored about such entities.

For example, each donor and patient is an entity. Entities are described by a set of attributes. For example, donor_blood_group and donor_age describe a donor. The set of all entities of the same type and set of all relationships of the same type is termed an entity set.

4.2 ATTRIBUTES

4.21 Key attributes

A key attribute is the unique characteristic of the entity.

For example in entity donor, donor_id is the key attribute.

4.22 Multivalued attributes

A multivalued attribute of an entity is an attribute that can have more than one value associated with the key of the entity.

In our ER- diagram we have not taken any multivalued attributes. But mobile no. or address should be taken as a multivalued attribute. We have not taken multivalued attributes so that our relational tables could be in first normal form.

4.23 Derived attributes

Derived attributes are the attributes that do not exist in the physical database, but their values are derived from other attributes present in the database.

For example, age can be derived from the date of birth.

4.24 Single Valued attributes

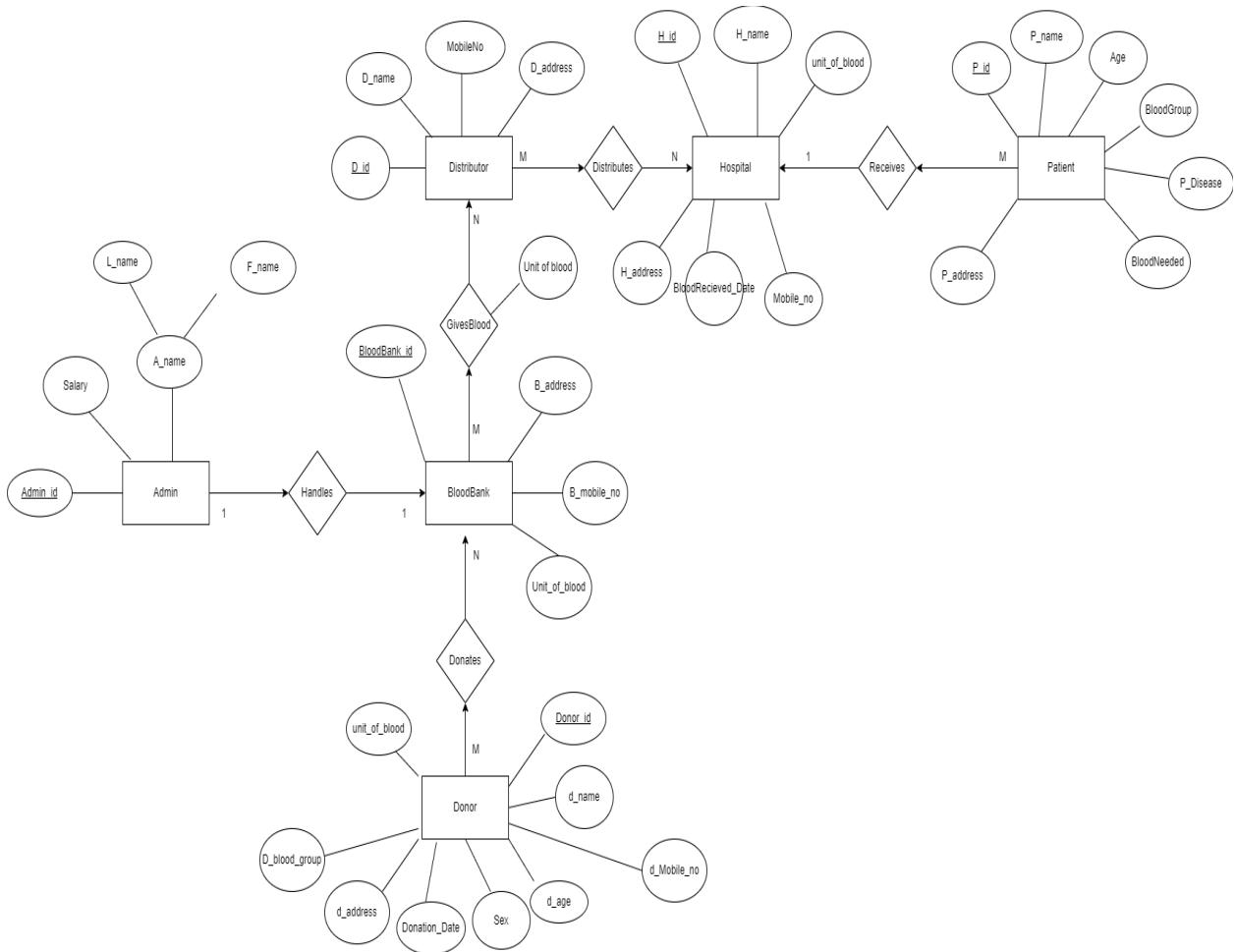
A single-valued attribute is an attribute that can have only a single value.

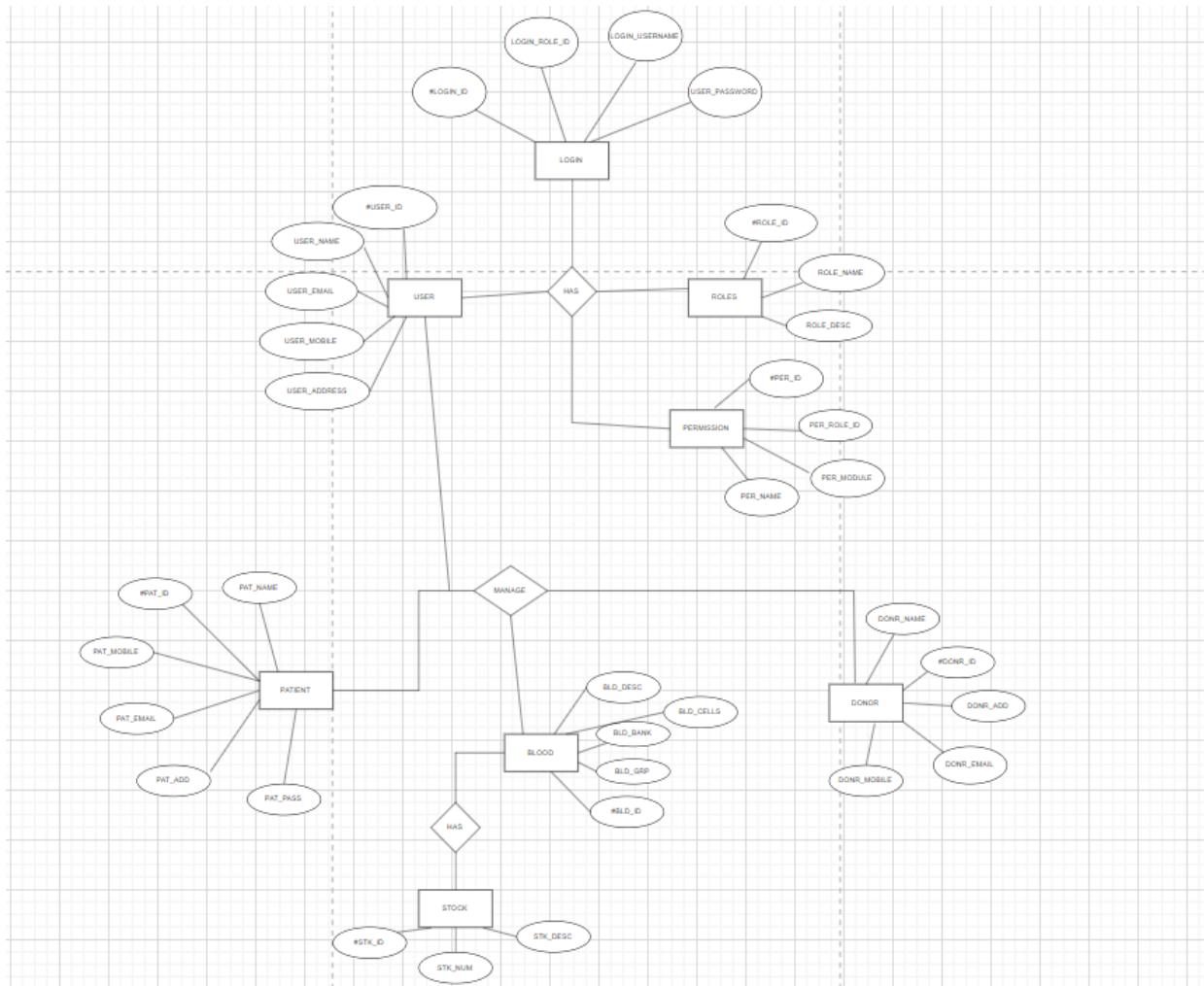
For example age, donor_id, and blood group.

4.25 Composite attributes

An attribute composed of many other attributes is called a composite attribute.

For example, the name attribute of Admin is composed of first name and last name.





Chapter 5:

What is a data flow diagram?

the data-flow diagram is a way of representing a flow of data through a process or a system. The DFD also provides information about the outputs and inputs of each entity and the process itself.

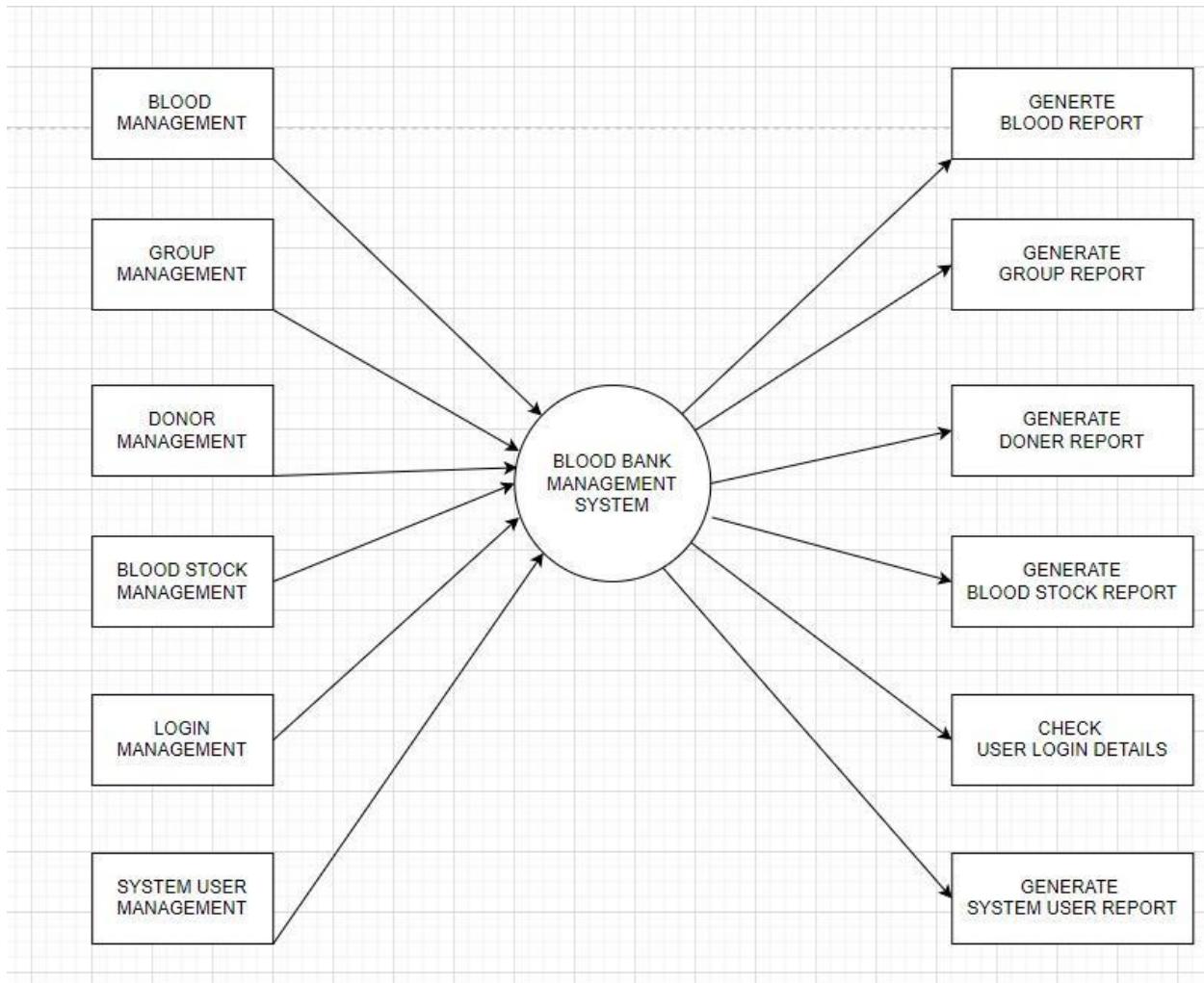


Fig 5.1 First-level data flow diagram.

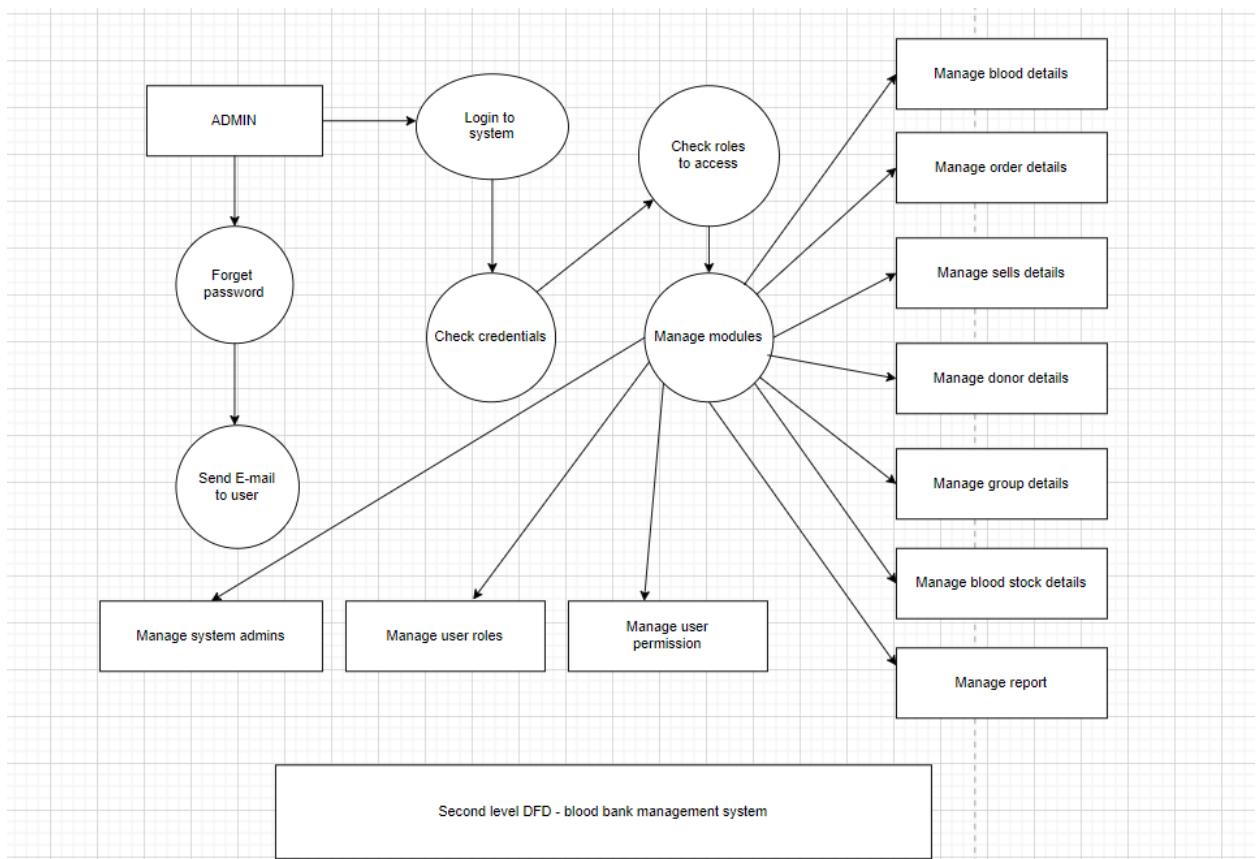


Fig 5.2 Second level Data flow diagram.

Chapter 6:

Screenshots of the working website:

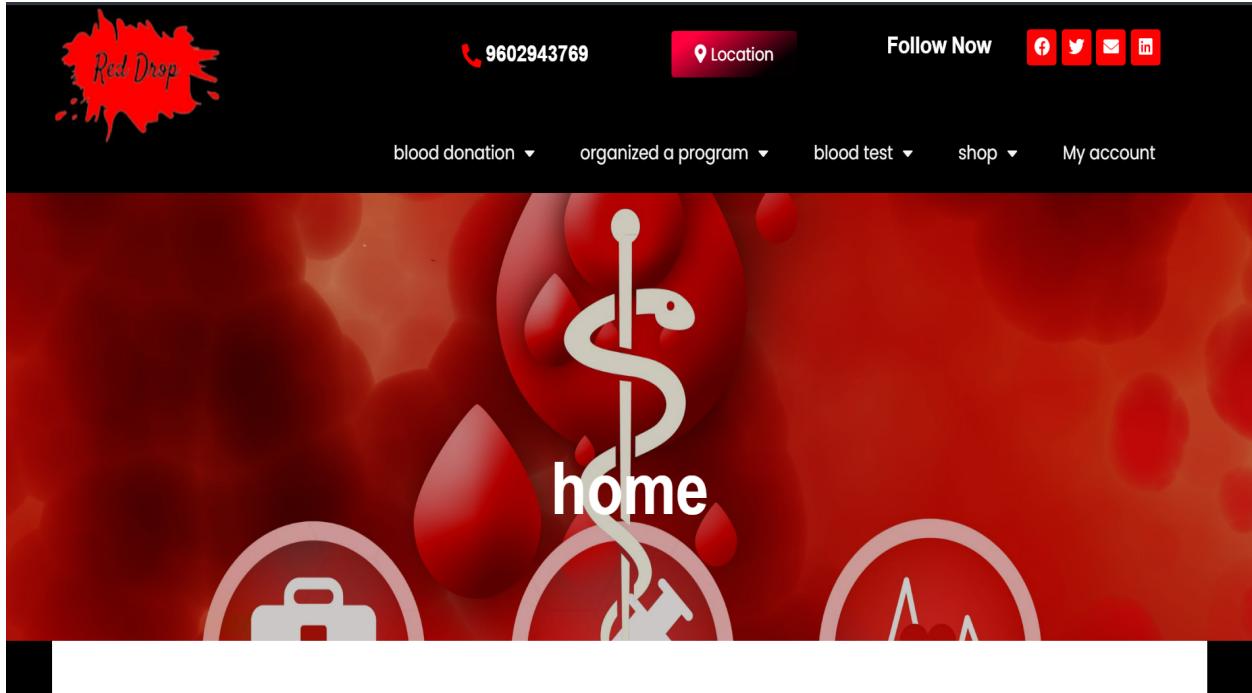


Fig 6.1 Home page (blood bank)

Login

Username or email address *

Password *

Eye icon for password visibility

Log in
 Remember me

[Lost your password?](#)

Register

Username *

Email address *

A link to set a new password will be sent to your email address.

Register

Fig 6.2 Registration and login page.

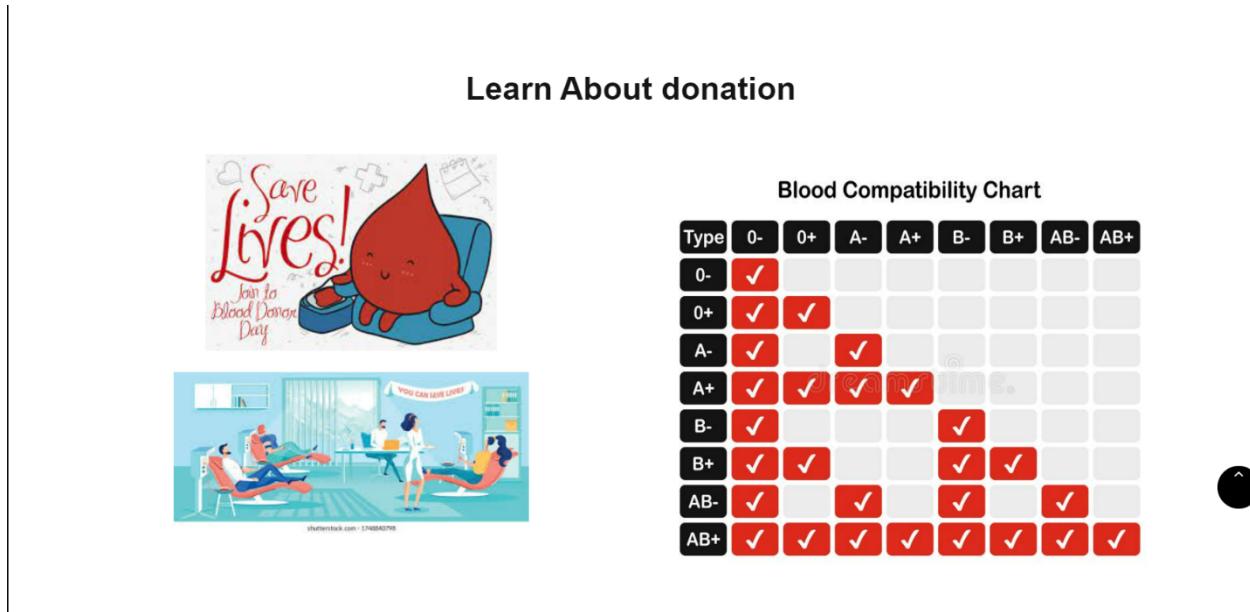


Fig 6.3 Information on the home page.

BLOOD DONAT E



Most People Can Give Blood If They Are In Good Health. There Are Some Basic Requirements One Need To Fulfill In Order To Become A Blood Donor. Below Are Some Basic Eligibility Guidelines:

Fig 6.4 information about who can donate.

During the donation

You must register to donate blood. This includes providing identification, your medical history, and undergoing a quick physical examination. You'll also be given some information about blood donation to read. Once you're ready, your blood donation procedure will begin. Whole blood donation is the most common type of donation. This is because it offers the most flexibility. It can be transfused as whole blood or separated into red cells, platelets, and plasma for different recipients. For a whole blood donation procedure:

1. You'll be seated in a reclining chair. You can donate blood either sitting or lying down.
2. A small area of your arm will be cleaned. A sterile needle will then be inserted.
3. You'll remain seated or lying down while a pint of your blood is drawn. This takes 8 to 10 minutes.
4. When a pint of blood has been collected, a staff member will remove the needle and bandage your arm.

Other types of donation include:

- platelet donation (plateletpheresis)
- plasma donation (plasmapheresis)
- double red cell donation

These types of donations are performed using a process called apheresis. An apheresis machine is connected to both of your arms. It collects a small amount of blood and separates the components before returning the unused components back to you. This cycle is repeated several times over approximately two hours. Once your donation is complete, you'll be given a snack and a drink and be able to sit and rest for 10 or 15

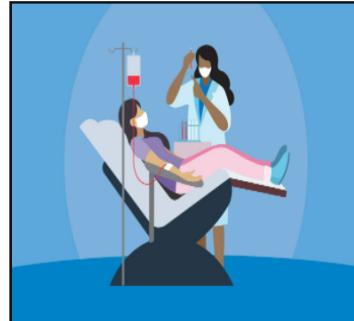


Fig 6.5 Information for first-time donors

STEP INTO THE CAMP

Ready for an adventure? Take a dive into my world of blood donation from blood donation
to gene donation



Fig 6.6 360 tours of a blood camp.

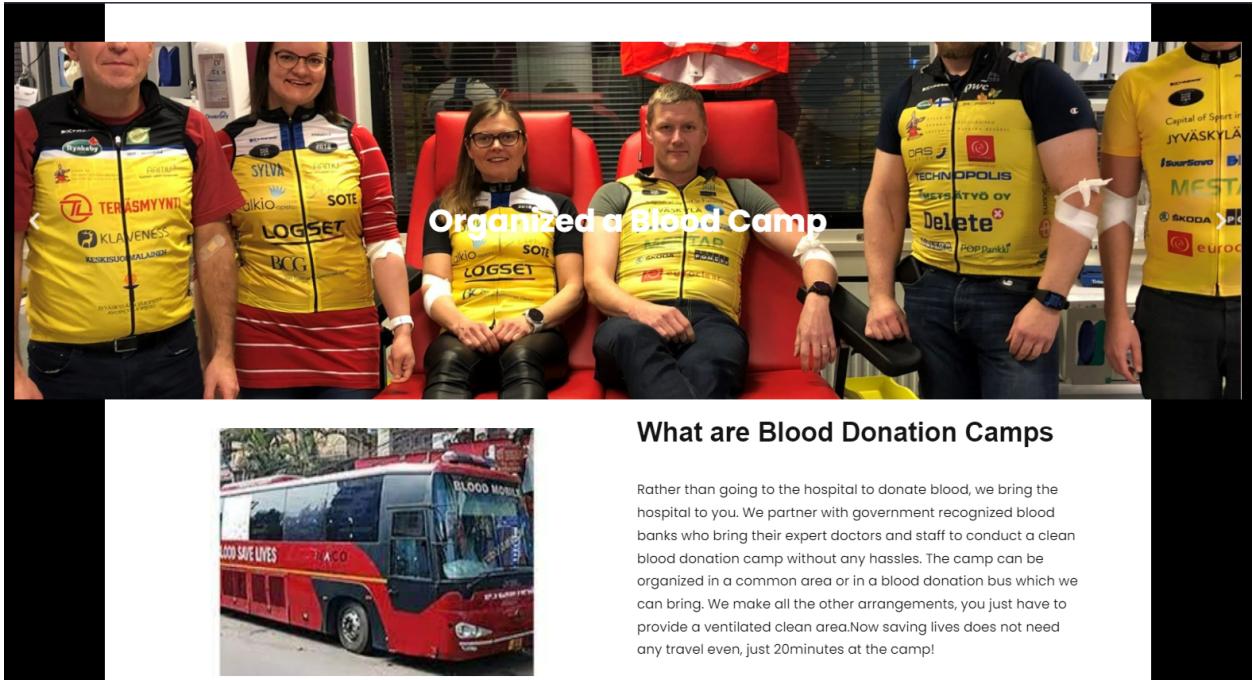


Fig 6.7 How to organize a blood camp.

Our Services

For over 1 month, we have been providing a wide range of professional blood test services to our community.



our services

your health

your knowledge

Troponin

A troponin test measures the level of troponin in your blood. Troponin is a type of protein found in the muscles of your heart. Troponin isn't normally found in the blood. When heart muscles become damaged, troponin is sent into the bloodstream. As **heart damage** increases, greater amounts of troponin are released in the blood.

Blood glucose (Hb A1c)

A hemoglobin **A1c** (HbA1c) test measures the amount of **blood sugar** (glucose) attached to hemoglobin. Hemoglobin is the part of your red blood cells that carries oxygen from your lungs to the rest of your body. An HbA1c test shows what the average amount of glucose attached to hemoglobin has been over the past three months.

Cholesterol (lipid profile)

A complete cholesterol test — also called a lipid panel or lipid profile — is a blood test that can measure the amount of cholesterol and triglycerides in your blood.

Fig 6.8 Test offers provided by us.

Summary for formation diseases

Hepatitis B	Hepatitis C
<p>Hepatitis B is a vaccine-preventable liver infection caused by the hepatitis B virus (HBV). Hepatitis B is spread when blood, semen, or other body fluids from a person infected with the virus enters the body of someone who is not infected.</p>	<p>Hepatitis C is a liver infection caused by the hepatitis C virus. Hepatitis C can range from a mild illness lasting a few weeks to a serious, long-term illness. Hepatitis C is often described as "acute," meaning a new infection, or "chronic," meaning long-term infection..</p>
Human Immunodeficiency Virus (HIV)	Human T-lymphotropic Virus (HTLV-I/II)
<p>HIV (human immunodeficiency virus) is a virus that attacks the body's immune system. If HIV is not treated, it can lead to AIDS (acquired immunodeficiency syndrome).</p>	<p>The virus can cause a type of cancer called adult T-cell leukaemia/lymphoma (ATL). HTLV-1 is transmitted primarily through infected bodily fluids including blood, breast milk and semen.</p>

Fig 6.9 Prerequisites for blood donation.

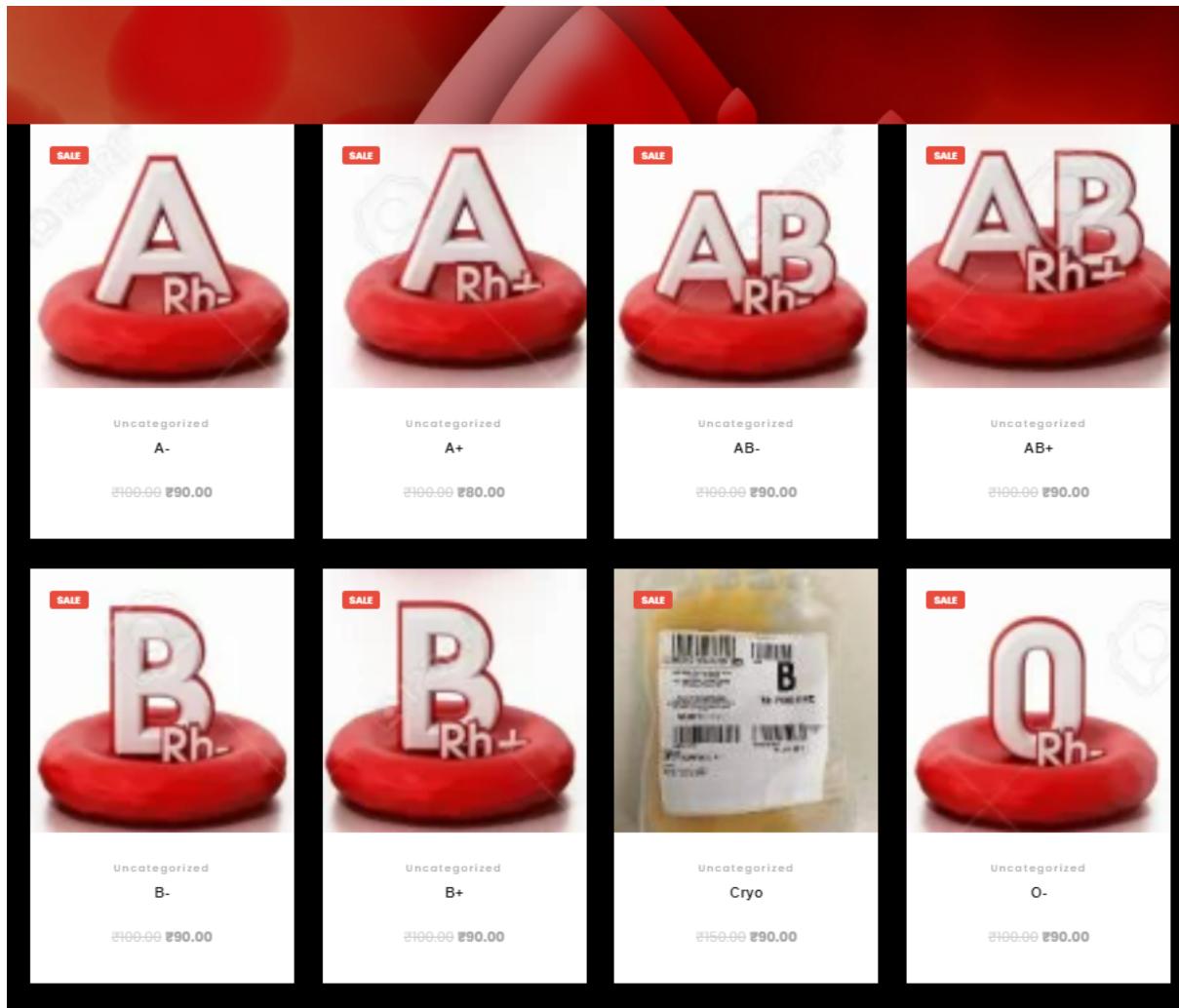


Fig 6.10 Offered blood types.

Product	Price	Quantity	Subtotal
 O+	₹90.00	1	₹90.00
 A-	₹90.00	1	₹90.00

Coupon code [Apply coupon](#) [Update cart](#)

Cart totals

Subtotal ₹180.00

Total ₹180.00

[Proceed to checkout](#)

Fig 6.11 Cart to finalize products.

Product	Subtotal
O+ × 1	₹90.00
A- × 1	₹90.00
Subtotal	₹180.00
Total	₹180.00

Cash on delivery

Pay with cash upon delivery.

Pay with UPI QR Code



Place order

Fig 6.12 Checkout and payment.

About Us

We are passionate about blood banking. Passionate about blood availability to every needy patient. Our compassion towards the human sufferings is the major factor that drives us for excellence in prompt and quality services to the society.

services provide

- » who can donate
- » pros and cons
- » first time donor
- » Home page

quick link

- » tour of camp
- » organized a blood camp
- » test for donation
- » test offers
- » products

become a member to receive more news

Know More About Us

Click here

Facebook Twitter Email LinkedIn

Fig 6.13 Quick links to quickly access any page without hassle.



Board of Directors

Hello everyone! My name is Pratham Singh, i am from Agra(Uttar Pradesh) and currently i am pursuing full time undergrad course BCA at JK Lakshmi pat University

Know more about us



Board of Directors

Hello everyone! My name is Devang Singhal, I am from Jaipur(Rajasthan) and currently I am pursuing full time undergrad course BCA at JK Lakshmi pat University

Know more about us

Fig 6.14 About us.

Chapter 7:

Scope of future application

We have already entered the age of Information Technology, where all the paperwork / manually managed files are about to finish, now with the help of this user-friendly suitable for all types of customers, all the files stored in the computer can be very well-formatted. Our website will become a good platform for a Blood Bank organization.

The present Blood Bank management project may be further developed for more complex needs in an organization according to the needs, and to meet the requirements of modern-day dynamic System Operation New options and their respective implementation may be done for this purpose.

Chapter 8:

Conclusion

Technology is introducing new innovations day by day, thus reducing the time required to do things. The proposed system website can be used to reduce the time required to deliver required blood to the needy in the case of an emergency depending on the circumstances. The prototype website can be used by the people interested in donating their blood by coming in our branches and they can even organize a blood bank camp. The website provides a way of communication and synchronization between the donors and the patients. It also provides them with the facility of communicating with nearby donors in an emergency.

The database is a vital aspect of the system. The database of the hospitals and the blood banks must be checked for consistency on regular basis for the smooth working of the system. The proposed system provides Google Maps which provides the user with an efficient way of locating our location. the system developed is quite feasible.

Chapter 9:

Bibliography

- <https://wordpress.org/download/> (WordPress)
- <https://www.apachefriends.org/download.html> (Xampp)
- <https://app.diagrams.net/> (Er-model and other diagrams designing website)