

MINI PROJECT REPORT

ON

“Lifesavers Network: Hope in Drop”

SUBMITTED IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS OF

DEGREE OF

BACHELOR OF ENGINEERING

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2024-25

Certificate

This is to certify that the Mini Project-1A entitled “**Lifesavers Network: Hope in Drop**” is a bonafide work of **Chetan Anekar, Amit Nalwade, Monu Shaha** submitted to the University of Mumbai in partial fulfilment of the requirement for the award of the degree of “**Undergraduate**” in “**Computer Engineering**”.

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Mini Project-1A Report Approval

This project report entitled “**Lifesavers Network: Hope in Drop**” submitted by “**Chetan Anekar, Amit Nalawade, Monu Shaha**” is approved for the degree of **Bachelor of Engineering in Computer Engineering**.

Examiners

1. _____

2. _____

Date:

Place:

Declaration

We declare that this written submission represents our ideas in our own words and where others ideas or words have been included. We have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will because for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Chetan Anekar

Amit Nalwade

Monu Shaha

Date:

Place:

Abstract

The Lifesavers Network: Hope in Drop project addresses the critical need for blood donations in healthcare systems. This initiative focuses on educating potential donors about the blood donation process, emphasizing essential terms and conditions to ensure informed participation. A significant component of the project is the integration of Body Mass Index (BMI) as a determining factor in blood donation eligibility, helping donors understand how their weight and age influence the volume of blood they can safely donate.

Through informative resources and community outreach, we aim to increase awareness and participation in blood donation, ultimately fostering a supportive network of donors. By promoting understanding and simplifying the donation process, Lifesavers Network aspires to transform the act of giving blood into a widely embraced community effort, ensuring that every drop of blood donated can save lives.

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Chapter 1

Introduction

Introduction

In today's world, where medical emergencies can arise at any moment, the need for blood donation has never been more critical. The Lifesavers Network: Hope in Drop project aims to bridge the gap between donors and recipients by promoting awareness and simplifying the blood donation process.

This project will cover essential aspects of blood donation, including necessary terms and conditions, to ensure that potential donors are well-informed. A key focus of our initiative is the Body Mass Index (BMI), a vital metric that helps determine the appropriate volume of blood a donor can safely contribute based on their weight and age. By educating individuals on these factors, we hope to encourage more people to participate in this life-saving act, fostering a community of compassion and support.

Join us as we explore the significance of blood donation and empower individuals to become lifesavers in their own right. Together, we can create a network of hope, ensuring that every drop counts.

Chapter 2

Requirement Gathering

2.1 Software and Hardware Requirements

Here we will discuss everything we will need in order to execute. Below we list the necessary hardware and software requirements.

1. Software Requirements:

- **Programming Languages:** HTML, CSS, JavaScript.
- **Operating System:** Windows 7 or above.
- **Editor-:**Notepad / VS Code.
- **Database:** MySQL.

2. Hardware Requirements:

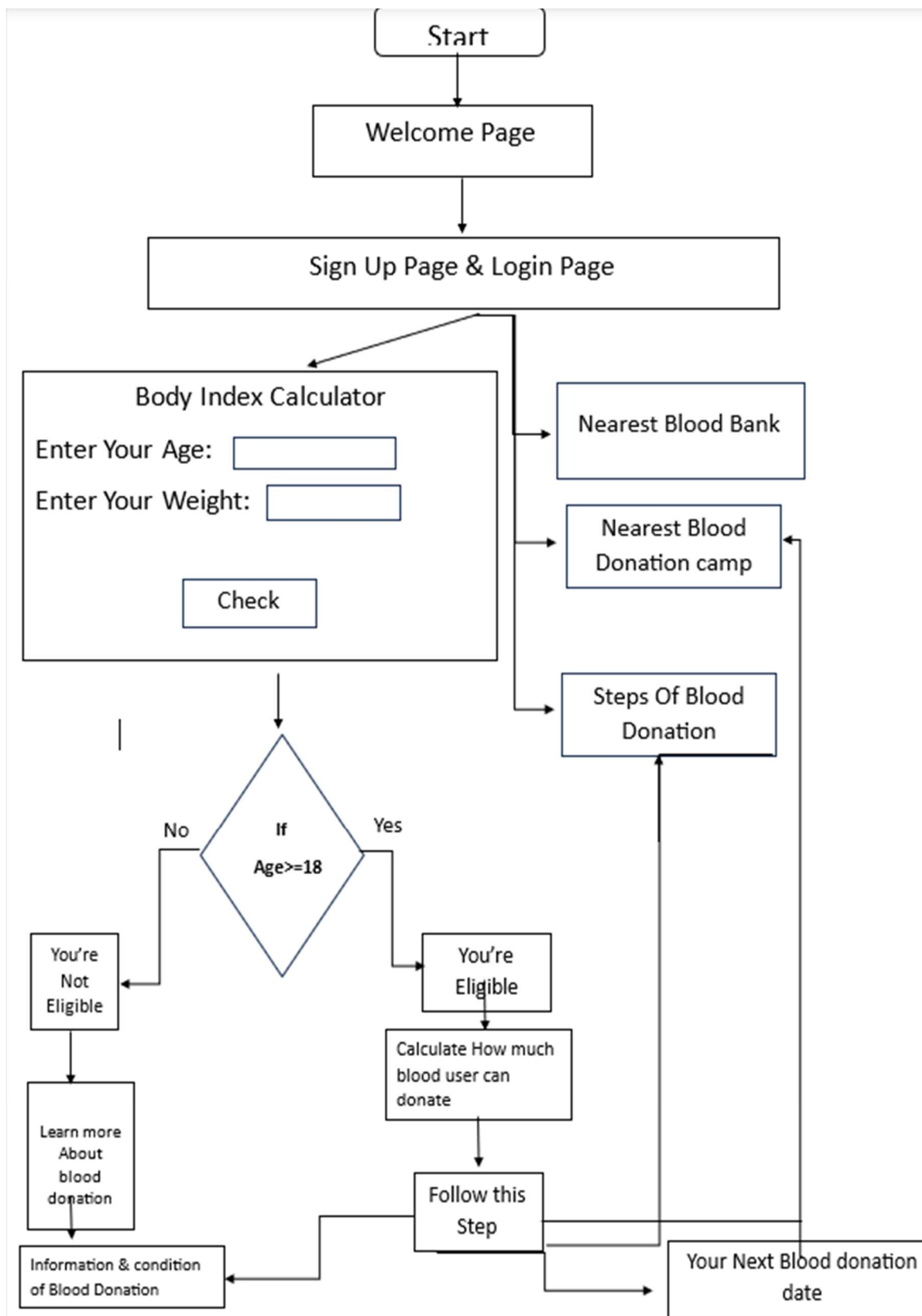
- **Processor:** Intel i3 or above
- **RAM:** Minimum 4 GB
- **Storage:** Minimum 1 GB or above for server setup
- **Device:** Laptop (HP Victus)

Chapter 3

Plan of Project

3.1 Proposed System Architecture

The system architecture for the “ **Lifesavers Network: Hope in Drop**” is designed with a clear separation between the front-end and back-end to ensure a scalable, efficient, and secure web application. At the front-end, the user interface (UI) is built using a combination of **HTML**, **CSS**. HTML provides the basic structure of the website, ensuring accessibility and compatibility across various browsers and devices. CSS defines the presentation and allows for rapid styling with a focus on responsiveness and design consistency. This ensures a modern, user-friendly, and visually appealing interface that is intuitive for both novice and experienced users. The back end is powered by **JavaScript** which handles server-side logic such as user authentication, product catalog management, and transaction processing.



3.2 Methodology

The development of the "Lifesavers Network: Hope in Drop" project follows a structured methodology to ensure effective planning, implementation, and evaluation. The approach consists of several key phases:

1. Research and Analysis

- **Literature Review:** Conduct a review of existing blood donation platforms and best practices to identify gaps and opportunities for improvement.
- **User Needs Assessment:** Gather insights from potential users, including donors and recipients, through surveys and interviews to understand their needs and expectations.

2. System Design

Architecture Planning: Design the system architecture, detailing the front-end and back-end components, data flow, and user interactions.

Wireframing: Create wireframes and prototypes of the user interface to visualize the layout and functionality before development

2. Development

- **Front-End Development:** Build the user interface using HTML and CSS, focusing on responsive design and user experience.

- **Back-End Development:** Implement server-side logic using JavaScript, ensuring user authentication, data management, and transaction processing functionalities are securely integrated.

3. Testing

- **Unit Testing:** Conduct unit tests on individual components to ensure they function as intended.
- **Integration Testing:** Test the interaction between front-end and back-end components to verify data flow and user interactions.
- **User Acceptance Testing:** Gather feedback from real users to identify any issues or areas for improvement before the official launch.

5. Deployment

- **Hosting and Launch:** Deploy the application on a reliable hosting platform, making it accessible to users.
- **Documentation:** Prepare user manuals and technical documentation to assist users and future developers.

6. Maintenance and Evaluation

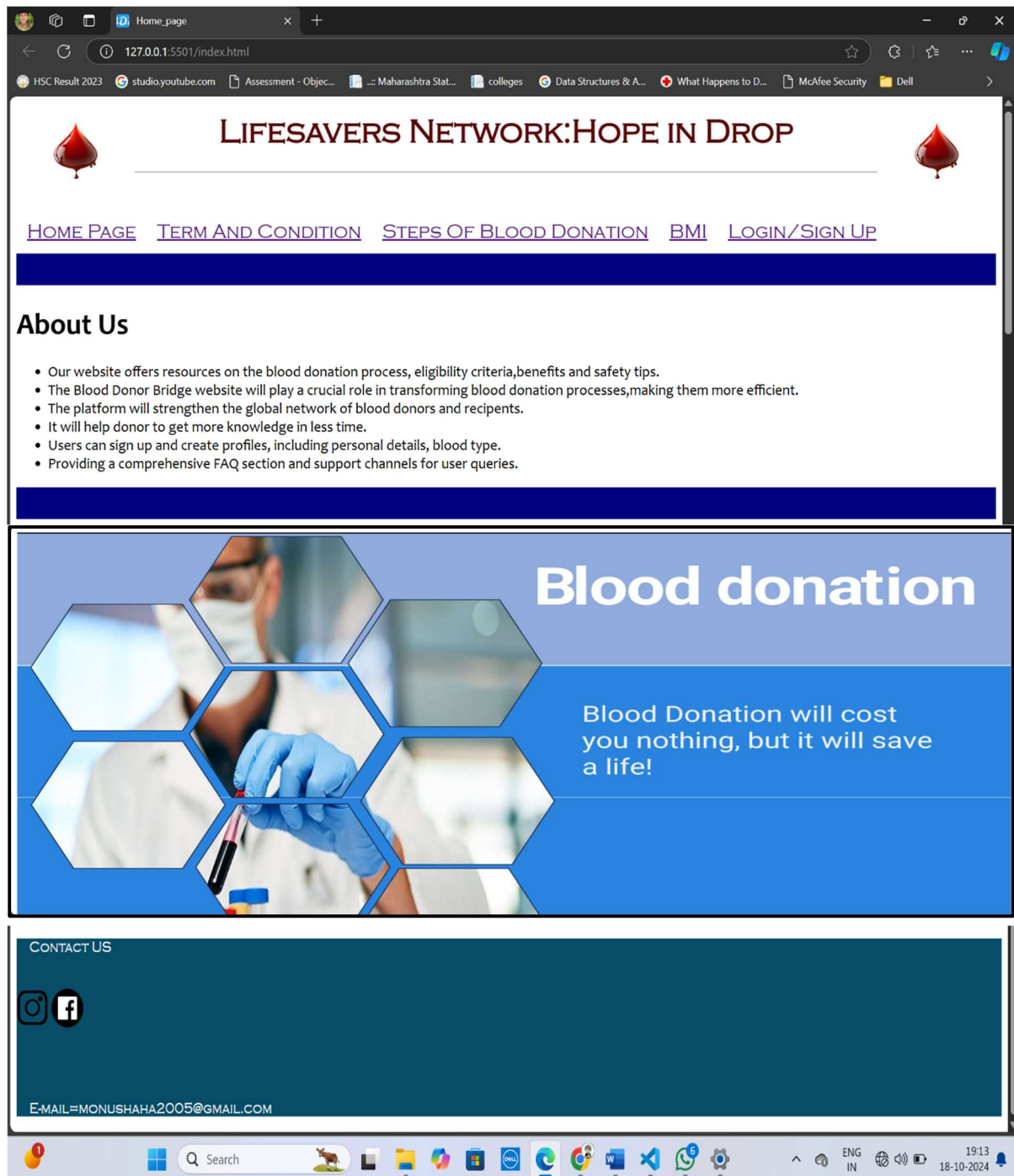
- **Monitoring:** Continuously monitor system performance and user feedback to identify and resolve any issues promptly.
- **Updates and Improvements:** Regularly update the platform based on user feedback and technological advancements to enhance functionality and user experience.

By following this methodology, the Lifesavers Network aims to create a robust, user-friendly platform that effectively facilitates blood donation, encourages community participation, and ultimately saves lives.

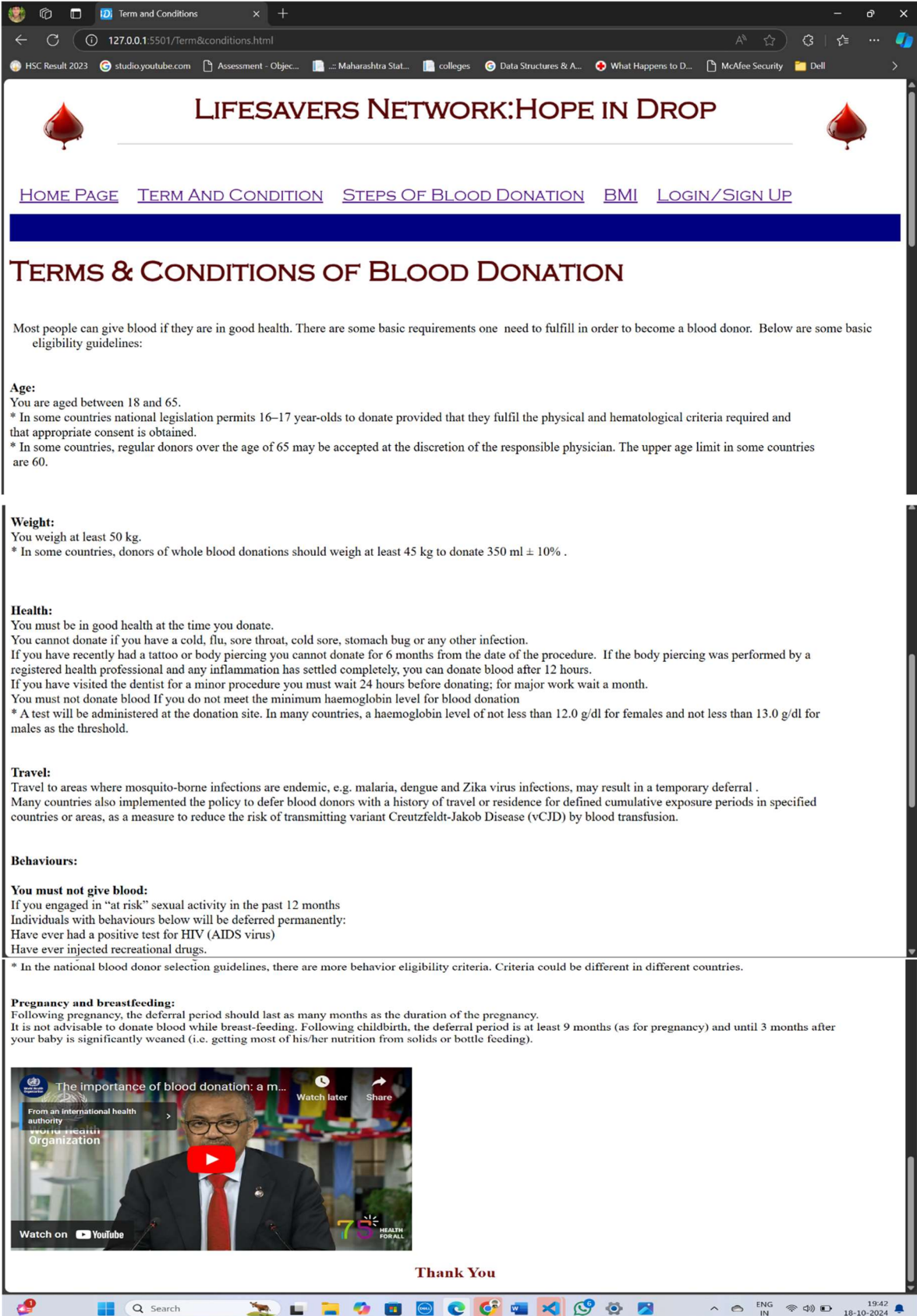
Chapter 4

Result

4.1 Home Page



4.2 Term & Condition



LIFESAVERS NETWORK:HOPE IN DROP

[HOME PAGE](#) [TERM AND CONDITION](#) [STEPS OF BLOOD DONATION](#) [BMI](#) [LOGIN/SIGN UP](#)

TERMS & CONDITIONS OF BLOOD DONATION

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:

Age:
 You are aged between 18 and 65.
 * In some countries national legislation permits 16–17 year-olds to donate provided that they fulfil the physical and hematological criteria required and that appropriate consent is obtained.
 * In some countries, regular donors over the age of 65 may be accepted at the discretion of the responsible physician. The upper age limit in some countries are 60.

Weight:
 You weigh at least 50 kg.
 * In some countries, donors of whole blood donations should weigh at least 45 kg to donate 350 ml \pm 10% .

Health:
 You must be in good health at the time you donate.
 You cannot donate if you have a cold, flu, sore throat, cold sore, stomach bug or any other infection.
 If you have recently had a tattoo or body piercing you cannot donate for 6 months from the date of the procedure. If the body piercing was performed by a registered health professional and any inflammation has settled completely, you can donate blood after 12 hours.
 If you have visited the dentist for a minor procedure you must wait 24 hours before donating; for major work wait a month.
 You must not donate blood If you do not meet the minimum haemoglobin level for blood donation
 * A test will be administered at the donation site. In many countries, a haemoglobin level of not less than 12.0 g/dl for females and not less than 13.0 g/dl for males as the threshold.

Travel:
 Travel to areas where mosquito-borne infections are endemic, e.g. malaria, dengue and Zika virus infections, may result in a temporary deferral .
 Many countries also implemented the policy to defer blood donors with a history of travel or residence for defined cumulative exposure periods in specified countries or areas, as a measure to reduce the risk of transmitting variant Creutzfeldt-Jakob Disease (vCJD) by blood transfusion.

Behaviours:
You must not give blood:
 If you engaged in "at risk" sexual activity in the past 12 months
 Individuals with behaviours below will be deferred permanently:
 Have ever had a positive test for HIV (AIDS virus)
 Have ever injected recreational drugs.
 * In the national blood donor selection guidelines, there are more behavior eligibility criteria. Criteria could be different in different countries.


Pregnancy and breastfeeding:
 Following pregnancy, the deferral period should last as many months as the duration of the pregnancy.
 It is not advisable to donate blood while breast-feeding. Following childbirth, the deferral period is at least 9 months (as for pregnancy) and until 3 months after your baby is significantly weaned (i.e. getting most of his/her nutrition from solids or bottle feeding).

The importance of blood donation: a message from the World Health Organization


Watch on YouTube

Thank You

4. Steps Of Blood Donatation



LIFESAVERS NETWORK:HOPE IN DROP




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What Happens to Donated Blood

Your blood journeys through many steps and tests that ensure our blood supply is as safe as possible and helps as many people as possible.


Learn About Each Step of the Blood Journey



Step One

The Donation


- You arrive for your blood donation appointment.
- Health history and mini physical are completed.
- For a whole blood donation, about 1 pint of blood is collected several small test tubes of blood are also collected for testing
- Your donation, test tubes and your donor record are labeled with an identical bar code label
- Your donation is kept on ice before being taken to a Red Cross center for processing; the test tubes go to the lab.



Second Step

Processing

- At our processing center, information about your donation is scanned into a computer database.
- Most whole blood donations are spun in centrifuges to separate it into transfusable components: red cells, platelets, and plasma.
- Plasma may be processed into components such as cryoprecipitate, which helps control the risk of bleeding by helping blood to clot.
- Red cells and platelets are leuko-reduced, which means your white cells are removed in order to reduce the possibility of the recipient having a reaction to the transfusion.
- Each component is packaged as a "unit," a standardized amount that doctors will use when transfusing a patient.



Third Step

Testing


- In parallel with Step 2, your test tubes arrive at a testing laboratory.
- A dozen tests are performed, to establish the blood type and test for infectious diseases.
- Test results are transferred electronically to the processing center within 24 hours.
- If a test result is positive, your donation will be discarded and you will be notified (our test results are confidential and are only shared with the donor, except as may be required by law).

Steps of Blood Bridge

127.0.0.1:5501/steps.html

HSC Result 2023 studio.youtube.com Assessment - Objec... Maharashtra Stat... colleges Data Structures & A... What Happens to D... McAfee Security Dell


the donor, except as may be required by law).



Step Four

Storage


- When test results are received, units suitable for transfusion are labeled and stored.
- Red cells are stored in refrigerators at 6°C for up to 42 days.
- Platelets are stored at room temperature in agitators for up to five days.
- Plasma and cryo are frozen and stored in freezers for up to one year.



Step Five

Distribution

- Blood is available to be shipped to hospitals 24 hours a day, 7 days a week.
- Hospitals typically keep some blood units on their shelves, but may call for more at any time, such as in case of large scale emergencies.





Step Six

Transfusion

- An ill or injured patient arrives at a hospital or treatment center
- Physicians determine whether the patient requires a transfusion and, if so, which type
- Blood transfusions are given to patients in a wide range of circumstances, including serious injuries (such as in a car crash) surgeries, child birth, anemia, blood disorders, cancer treatments, and many others.
- A patient suffering from an iron deficiency or anemia may receive red blood cells to increase their hemoglobin and iron levels, improving the amount of oxygen in the body.

Contact US

E-mail=monushaha2005@gmail.com

4.4.1 BMI (Body Mass Index) Input

The screenshot shows a web browser window with the URL `127.0.0.1:5501/bodyindexcalculator.html`. The page features the "LIFESAVERS NETWORK: HOPE IN DROP" header with two blood drop icons. Below the header is a navigation bar with links: [HOME PAGE](#), [TERM AND CONDITION](#), [STEPS OF BLOOD DONATION](#), [BMI](#), and [LOGIN/SIGN UP](#). The main content area is titled "Body Mass Index Calculator". It contains three input fields: "Age :-" with a text input containing "Enter Your age", "Enter Your Weight :-" with a text input containing "Weight in KG", and "Enter Your Blood Group :-" with a dropdown menu showing "Select". A "Submit" button is located below these fields. The Windows taskbar at the bottom shows the date as 18-10-2024 and the time as 20:17.

4.4.1 BMI (Body Mass Index) Output

The screenshot shows the same web browser window as the previous one, but with the input fields filled: "Age :-" is 19, "Enter Your Weight :-" is 34, and "Enter Your Blood Group :-" is AB+. A modal dialog box is displayed in the center of the screen with the text "127.0.0.1:5501 says Your not eligible" and an "OK" button. The "Submit" button on the form is disabled. The Windows taskbar at the bottom shows the date as 18-10-2024 and the time as 20:17.

4.5.1 Login

LIFESAVERS NETWORK:HOPE IN DROP

[HOME PAGE](#) [TERM AND CONDITION](#) [STEPS OF BLOOD DONATION](#) [BMI](#) [LOGIN/SIGN UP](#)

Sign Up

Name :-

DOB :-

Gender :-

Phone number :-

Email :-

Create Password :-

4.5.2 Sign Up

LIFESAVERS NETWORK:HOPE IN DROP

[HOME PAGE](#) [TERM AND CONDITION](#) [STEPS OF BLOOD DONATION](#) [BMI](#) [LOGIN/SIGN UP](#)

Sign Up

Name :-

DOB :-

Gender :-

Phone number :-

Email :-

Create Password :-

Chapter 5

Conclusion

Conclusion

The "Lifesavers Network: Hope in Drop" project embodies a vital initiative to enhance blood donation awareness and participation within communities. By integrating a well-defined system architecture, comprehensive methodology, and a focus on user experience, we aim to create an efficient and secure platform that connects donors and recipients effectively.

Through education on the blood donation process, including the significance of Body Mass Index (BMI) in determining donation eligibility, we empower individuals to make informed decisions about their contributions. The project not only seeks to increase the number of registered donors but also fosters a sense of community and shared responsibility in saving lives.

As we move forward, ongoing monitoring, user feedback, and regular updates will ensure the platform remains relevant and responsive to the needs of its users. Ultimately, the Lifesavers Network aspires to cultivate a culture of compassion and support, making every drop of blood count and providing hope to those in need. Together, we can create a healthier future, one donation at a time.

Chapter 6

References

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