

Acknowledgement

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I am also profoundly thankful to my family, whose unwavering support, patience, and motivation have been my greatest source of strength. Their belief in me has helped me stay focused and dedicated to completing this project successfully.

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Lastly, I wish to acknowledge everyone who has directly or indirectly contributed to this project, whether through resources, guidance, or moral support. Your contributions have made this journey both enriching and fulfilling.

Certificate

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Introduction to project

Introduction :-

The Blood Donation Website is a platform designed to facilitate blood donations by connecting donors with recipients efficiently. The website includes features such as donor registration, blood requests, admin approval, and a contribution section for monetary donations. The goal of this system is to streamline the blood donation process and make blood availability easier for those in need.

Blood donation is a vital process that helps save countless lives by providing necessary blood units to hospitals and emergency care centers. With increasing demand for blood and frequent shortages, there is a need for a well-organized and efficient system to manage blood donations. Our Blood Donation Website aims to bridge the gap between blood donors and recipients by offering a digital platform where donors can register and recipients can request blood based on availability. By leveraging modern technology, this website provides a structured approach to maintaining a network of potential donors, ensuring that emergency blood needs are met with minimal delays.

Need for a Blood Donation Website :-

In many countries, blood shortages are a recurring issue due to an imbalance between blood supply and demand. Emergencies, accidents, surgeries, and certain medical conditions require timely blood transfusions, making a streamlined blood donation system essential. Traditionally, hospitals rely on voluntary donations and blood banks, but finding suitable donors quickly can be challenging without an organized system.

With technological advancements, integrating digital solutions into the healthcare sector has become crucial. A web-based blood donation system simplifies the process of locating and contacting donors, ensuring that blood is available when needed. The implementation of such a system helps reduce the dependency on manual efforts and minimizes the time taken to arrange for blood in emergency situations. Additionally, digital record-keeping ensures that data is stored securely and can be accessed easily by authorized users. The introduction of such an innovative approach encourages more individuals to become regular blood donors, thereby reducing the frequency of shortages and making the donation process more efficient and transparent.

How the Blood Donation Website Works :-

The Blood Donation Website functions as an intermediary platform connecting donors with those in need. The key functionalities include:

- **User Registration:** Individuals willing to donate blood can sign up by providing essential details such as name, contact information, blood group, and location.
- **Blood Requests:** Recipients can submit requests specifying their required blood group and location, allowing them to find compatible donors nearby.
- **Admin Verification:** An admin panel is included to oversee donor approvals, ensuring the authenticity of registered users and preventing misuse of the platform.
- **Search and Notification System:** A built-in search feature allows users to locate potential donors quickly. Additionally, notifications can be sent to donors about urgent blood requirements in their area.
- **Secure Database Management:** The system securely stores donor and recipient information, allowing for efficient retrieval and data management.
- **Financial Contributions:** A dedicated section enables users to contribute monetarily to support blood donation campaigns and medical organizations.
- **Donation History Tracking:** Donors can view their past donations, keeping track of their contributions and eligibility for future donations.

Benefits of the Blood Donation Website :-

The platform offers multiple benefits, including:

- **Enhanced Accessibility:** The website allows users to access donor information from anywhere, making it easier to find blood donors in emergencies.
- **Time Efficiency:** Automated donor-matching reduces the time required to locate suitable donors, which is crucial in life-threatening situations.
- **Encouraging Voluntary Donations:** By offering a user-friendly interface, the platform encourages more people to register as donors and contribute to the cause.
- **Organized Donor Database:** Unlike traditional systems that rely on paperwork, this website maintains a digital record of donors, allowing for efficient tracking and updates.
- **Transparency and Security:** Since donor details are verified by an admin, the chances of fraudulent registrations are minimized, ensuring that only genuine donors are listed.
- **Community Engagement:** The website promotes a sense of social responsibility by enabling users to participate in organized blood donation drives and awareness campaigns.
- **Reducing Blood Shortages:** With an efficient donor management system, hospitals and medical facilities can reduce dependency on last-minute appeals for blood donations, ensuring a more stable and continuous blood supply.

Challenges in Blood Donation and How This Website Helps :-

Despite the importance of blood donation, several challenges persist, including:

- **Lack of Awareness:** Many people are unaware of the need for regular blood donation and how it can save lives.

- **Fear and Misconceptions:** Some potential donors hesitate due to myths about blood donation affecting their health.
- **Shortage of Regular Donors:** While some individuals donate during emergencies, there is a lack of consistent donors.
- **Difficulty in Finding Compatible Donors:** In cases of rare blood types, locating a matching donor can be difficult.

The Blood Donation Website helps address these issues by :-

- Providing educational resources to spread awareness about blood donation.
- Offering a safe and easy registration process to encourage more individuals to sign up.
- Implementing a notification system to remind donors when their next donation is due.
- Allowing recipients to filter donors by blood type and location, making it easier to find compatible matches quickly.

Impact on Society :-

By implementing this system, the overall efficiency of blood donation management improves significantly. Hospitals and blood banks can rely on a well-organized database rather than manual searches, reducing delays in medical emergencies. More lives can be saved with an easily accessible network of donors willing to contribute to the cause. Additionally, the system promotes a culture of voluntary blood donation by making the process more transparent and structured.

Beyond emergencies, the website can be instrumental in organizing large-scale blood donation drives and community awareness programs. Schools, colleges, and corporate organizations can collaborate with the platform to conduct donation camps, further strengthening the donor network. By leveraging technology, the platform not only ensures immediate availability of blood but also encourages individuals to become regular donors, thereby improving the overall healthcare ecosystem.

The role of digital platforms in healthcare is expanding, and a blood donation website aligns perfectly with the global vision of making medical services more accessible and efficient. As society moves towards digitization, such systems play a crucial role in bridging the gap between donors and recipients and ensuring that no life is lost due to the unavailability of blood.

Conclusion

The Blood Donation Website is a crucial step towards improving the blood donation process and ensuring that patients in need receive timely help. By leveraging digital solutions, the platform minimizes the difficulties associated with finding donors, streamlines communication, and

encourages more people to participate in blood donation programs. With its user-friendly interface, real-time connectivity, and robust security measures, this website is a promising initiative to enhance blood donation efficiency and accessibility in society.

By promoting a culture of voluntary blood donation, this system serves as a bridge between donors and recipients, ensuring that every drop of blood reaches those who need it the most. It is a revolutionary step in modernizing the blood donation process, ultimately contributing to a more organized and life-saving healthcare system. As more individuals and institutions recognize the importance of blood donation, platforms like this can significantly improve emergency response times, saving countless lives in the process.

Hardware and Software Specifications

➤ **Hardware Requirements:**

- Processor: Intel Core i3/i5/i7 or equivalent
- RAM: 4GB or higher
- Storage: Minimum 20GB free space
- Internet Connection: Required for online hosting

➤ **Software Requirements:**

- Operating System: Windows/Linux/MacOS
- Server: XAMPP,WAMP,ANY OTHER
- Technologies Used: HTML, CSS, JavaScript, PHP, MySQL
- Browser: Google Chrome/Mozilla Firefox

System Analysis

A successful system must be evaluated based on multiple feasibility criteria to ensure it is practical, efficient, and viable for implementation. The Blood Donation Website has been analyzed under three key feasibility aspects: Technical Feasibility, Operational Feasibility, and Economic Feasibility.

1. Technical Feasibility

Technical feasibility assesses whether the required technology, tools, and resources are available for developing and maintaining the system. The Blood Donation Website is developed using widely used and well-supported web technologies, ensuring ease of deployment and future scalability.

- The frontend of the website is built using HTML, CSS, and JavaScript, which are standard technologies for web development.
- The backend is developed using PHP and MySQL, allowing efficient database management, user authentication, and real-time data retrieval.
- The system runs on web servers such as Apache or Nginx, which are compatible with most hosting environments.
- The website is designed to be responsive and mobile-friendly, ensuring accessibility across multiple devices, including smartphones, tablets, and desktop computers.
- Security measures such as input validation, password encryption, and admin verification are incorporated to prevent unauthorized access.

Since all the technologies used are open-source and widely documented, developers can easily maintain and upgrade the system as needed. Additionally, as the system is web-based, there is no need for additional software installations on user devices, making it more convenient for donors and recipients to access the platform anytime.

2. Operational Feasibility

Operational feasibility determines whether the system is user-friendly, practical, and efficient in solving the intended problem. The Blood Donation Website is designed to be intuitive and easy to use for donors, recipients, and administrators.

- User-Friendly Interface: The website has a clean and straightforward design, making navigation easy for all users, including those who may not be tech-savvy.
- Simple Registration Process: Donors and recipients can register quickly by entering their details, ensuring that the process of finding or donating blood is hassle-free.
- Efficient Blood Matching System: Recipients can search for compatible donors based on blood type and location, ensuring faster response times.
- Real-Time Notifications: Donors can receive alerts when there is an urgent blood request in their area, making the system proactive in life-saving situations.

- Admin Approval System: To prevent misuse, all registrations and blood requests go through an admin verification process, ensuring authenticity and reliability.
- Multi-Device Accessibility: The website can be accessed from desktops, laptops, tablets, and mobile phones, allowing users to interact with the platform at their convenience.

With these features, the system ensures that both donors and recipients can benefit from a seamless experience, making it an efficient, practical, and easy-to-operate solution for blood donation management.

3. Economic Feasibility

Economic feasibility evaluates whether the project is cost-effective and provides a good return on investment (ROI). The Blood Donation Website is developed using open-source tools, making it a cost-efficient solution.

- Low Development Cost: Since the website is built using open-source technologies like PHP, MySQL, HTML, CSS, and JavaScript, there is no licensing cost associated with its development.
- Minimal Hosting Costs: The website can be hosted on affordable web servers, reducing operational expenses.
- No Need for Special Hardware: The system runs on any device with internet access, eliminating the need for specialized hardware or software.
- Reduced Dependency on Paperwork: Traditional blood donation systems rely on manual documentation, which is costly and time-consuming. By digitizing the process, the system reduces administrative costs significantly.
- Encouraging More Donations: By making blood donation more accessible, the platform increases the number of donors, reducing the cost of organizing offline blood donation drives.

Since the Blood Donation Website requires minimal investment while providing maximum impact, it is a financially sustainable solution. It is a highly economical system that provides a life-saving service at a very low cost.

System Design and Behavioral Description

1. Introduction to System Design

System design is a crucial phase in software development that involves defining the architecture, components, and flow of data within a system. The Blood Donation Website is designed to efficiently connect blood donors with recipients through an easy-to-use online platform. The system is structured to handle donor registrations, blood requests, admin approvals, and financial contributions seamlessly.

This document outlines the design structure of the system, including Data Flow Diagrams (DFDs) at various levels to illustrate the flow of data and interaction between different components. The system's behavior is also explained to demonstrate how it processes user inputs and manages data securely.

2. Overall System Architecture

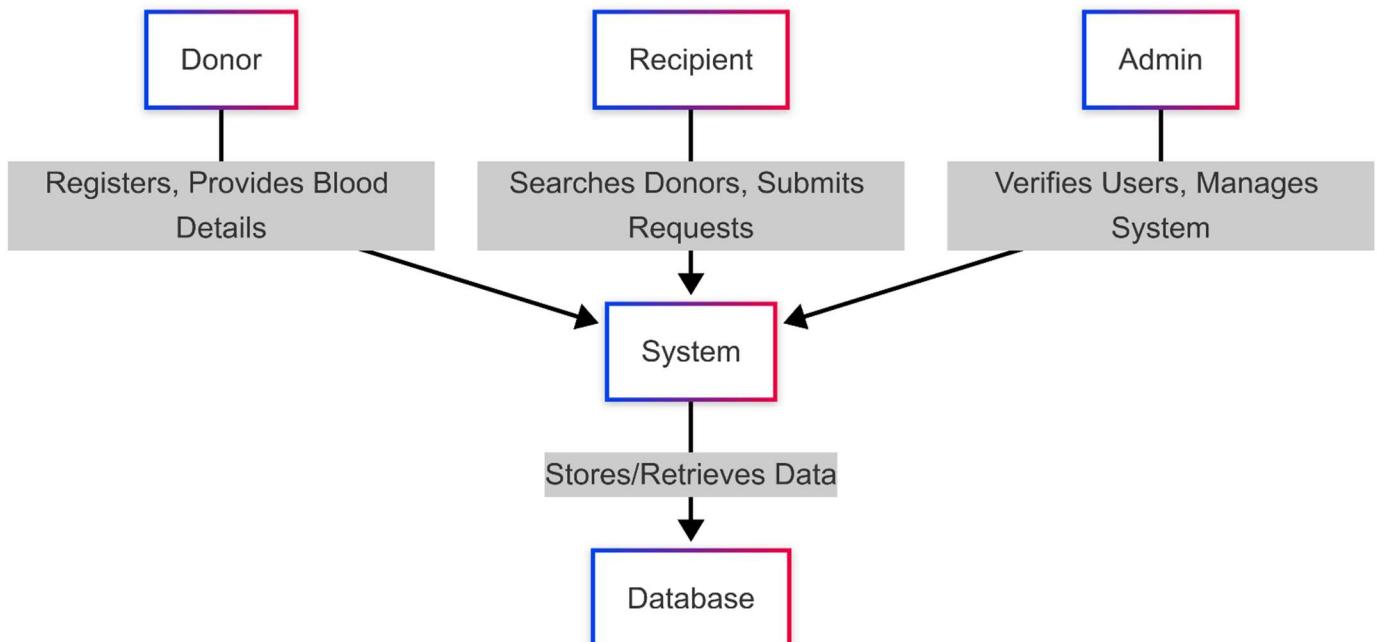
The Blood Donation Website follows a three-tier architecture:

- **Presentation Layer:** The user interface designed using HTML, CSS, and JavaScript.
- **Application Layer:** The backend logic developed using PHP.
- **Database Layer:** Data storage and retrieval handled by MySQL.

Each layer is responsible for ensuring a smooth and efficient workflow of the system.

3. DFD Level 0: Context Diagram

DFD Level 0 - Context Diagram



The **Level 0 DFD (Context Diagram)** represents the system as a single process and shows the interaction between users and the system.

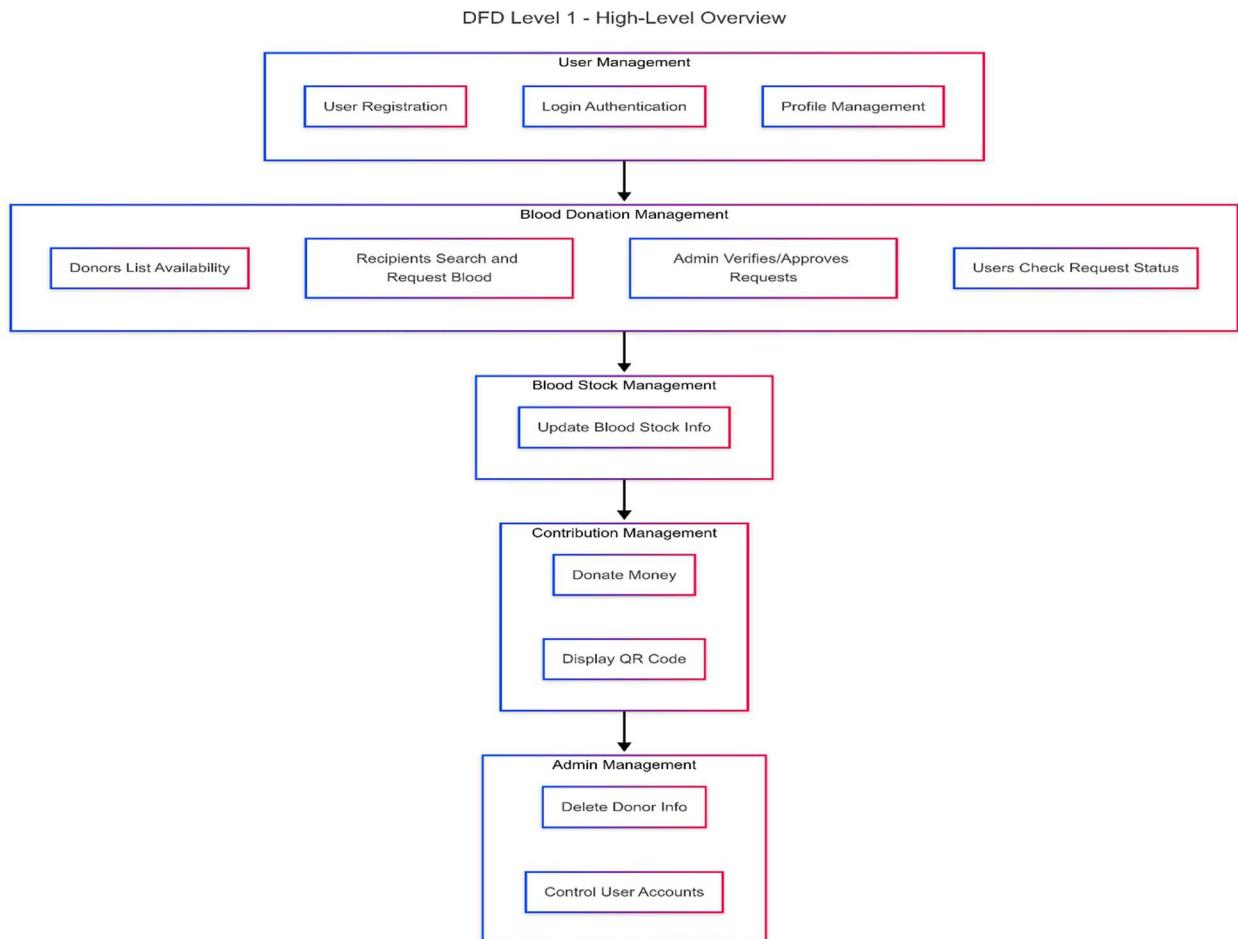
Entities:

- **Donor:** Registers on the platform, provides blood group details, and responds to blood requests.
- **Recipient:** Searches for available donors, submits blood requests, and checks request status.
- **Admin:** Verifies users, approves or rejects donation requests, manages contributions, and monitors the system.
- **System Database:** Stores all user and transaction-related information.

Data Flow:

- Donors and recipients interact with the system through web forms.
- Admin processes and verifies information.
- The system database stores and retrieves necessary data.

4. DFD Level 1: High-Level Overview



This diagram breaks down the system into major functional modules:

1. User Management:

- User Registration (Donors and Recipients)
- Login Authentication
- Profile Management

2. Blood Donation Management:

- Donors list their availability
- Recipients search and request blood
- Admin verifies and approves/rejects requests
- Users can check their request status

3. Blood Stock Management:

- Donors' information is stored and displayed based on availability
- Admin can update available blood stock information

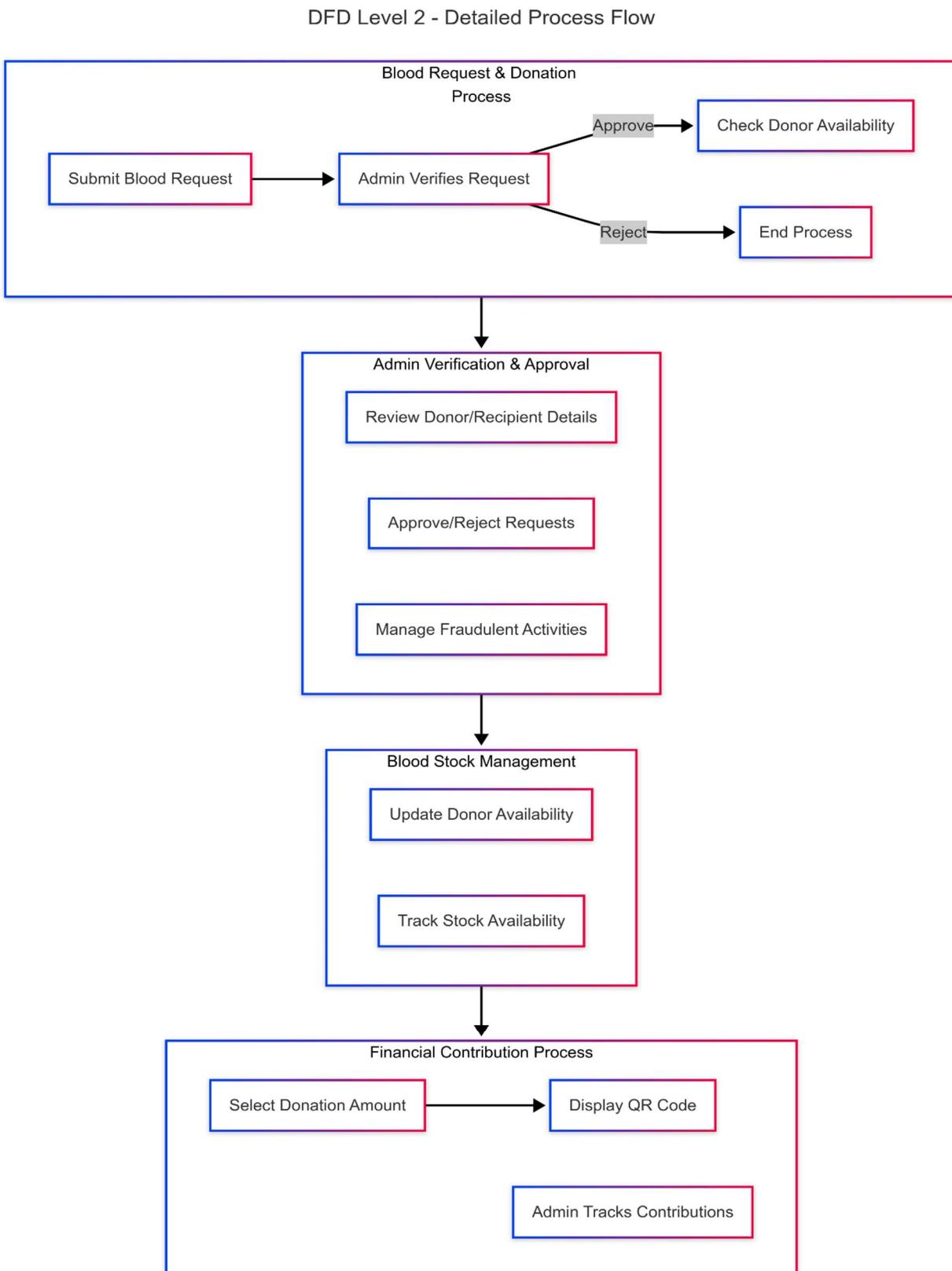
4. Contribution Management:

- Users can donate money to support blood donation campaigns.
- A QR code is displayed for monetary donations.

5. Admin Management:

- Admin can delete donor information
- Admin can approve or reject blood requests
- Admin has control over user accounts and contributions

5. DFD Level 2: Detailed Process Flow



This diagram further expands on Level 1 by detailing specific sub-processes:

Blood Request & Donation Process

- A recipient submits a blood request.
- The admin verifies the request and either approves or rejects it.
- Approved recipients can check donor availability.

Admin Verification & Approval

- Admin reviews donor and recipient details.
- Approves or rejects blood requests.
- Manages fraudulent or suspicious activities.
- Admin can delete donor information if necessary.

Blood Stock Management

- Donors' availability is updated upon successful registration.
- Admin can update blood stock availability for better tracking.

Financial Contribution Process

- User selects a donation amount.
- A QR code is displayed for secure payment processing.
- Admin can track and manage financial contributions.

6. Behavioral Description

The Blood Donation Website is designed to facilitate seamless interaction between blood donors, recipients, and administrators. It allows users to donate blood, check available blood stock, request blood, track request status, and contribute financially using a QR code donation system. The website also features an admin section where administrators can manage donor records, approve or reject requests, and oversee blood availability.

1. User Roles and Interaction Flow

The website supports three primary roles: donors, recipients, and administrators. Each role has distinct functionalities, ensuring smooth platform operation.

A. Donors:

- Register on the website by providing necessary details like name, blood group, contact number, and location.
- Their information is stored securely in the database for future reference.
- Donors can also contribute financially through the donation section.

B. Recipients:

- Search for available blood units by selecting their required blood group .
- They can submit a blood request form.
- Track the status of their request (Pending, Approved, or Rejected).
- Upon approval, the recipient gets access to donor details or further instructions on how to proceed.

c. Administrators:

- Have full control over the platform and can manage user interactions.
- View and approve/reject blood donation requests based on availability.
- Maintain and update the blood stock records.
- Delete inactive or irrelevant donor records.
- Monitor financial contributions and ensure transparency in fund utilization.

2. Blood Donation and Request Processing Flow

The process of blood donation and request fulfillment follows a structured flow to ensure an efficient and secure system.

1. **Donor Registration:** A donor registers by filling in personal details, selecting their blood group, and specifying their location.
2. **Blood Stock Checking:** Recipients can check the available blood units from a real-time blood stock database.
3. **Request Submission:** Recipients submit a request specifying their required blood type and urgency level.
4. **Admin Verification:** The admin reviews the request and approves or rejects it based on availability and donor eligibility.
5. **Status Update:** Recipients can track their request status through their dashboard.
6. **Donation Completion:** If approved, the recipient is provided with the necessary details to proceed with the donation process.

3. Blood Stock Management Behavior

- Blood stock records are maintained in the system and updated whenever a donation occurs.

- The admin can manually add or remove blood units based on new donations or used stocks.
- If stock runs low, the admin can send out requests for more donations.
- Blood groups with fewer donors receive priority notifications for more donations.

4. Donation Contribution Behavior (Financial Donations)

- The website features a QR code-based donation system where users can contribute funds.
- These funds are used to support blood donation drives, medical centers, and awareness programs.
- The admin keeps track of received donations and maintains transparency by logging financial contributions.

5. Request Status Tracking Behavior

- Each blood request follows a structured status update mechanism:
 - **Pending:** The request is under admin review.
 - **Approved:** The recipient is notified and can proceed with the donation process.
 - **Rejected:** If rejected, the recipient is notified with a reason (e.g., unavailability, incomplete details).
- This tracking ensures recipients stay informed without needing manual follow-ups.

6. Security Measures and Error Handling

To ensure secure and smooth operations, the website includes several security features:

- **User Authentication:** Ensures only legitimate users can donate, request, or manage data.
- **Admin Approval:** Prevents unauthorized blood requests or fake donor registrations.
- **Data Validation:** Ensures all user inputs are properly formatted before storage.
- **Error Handling Mechanism:**
 - If incorrect information is entered, the system provides feedback for correction.

7. Administrator Controls and Management

- The Admin Dashboard provides a centralized system to manage all users and transactions.
- Admins can:
 - View and manage donor registrations.
 - Accept or reject blood requests.
 - Maintain blood stock levels.
 - Remove inactive donors.

8. Benefits of This System

This Blood Donation Website brings multiple advantages, including:

- **Faster Donor-Recipient Matching:** Quick search and request system.
- **Efficient Blood Stock Management:** Keeps real-time records of available blood units.
- **Simplified Financial Support:** Enables easy monetary contributions via QR codes.
- **Transparency and Security:** Admin-monitored system with verified data.
- **User-Friendly Interface:** Simple and intuitive navigation for all users.

Source code

1. INDEX.PHP(Main home page) :-

C:\Users\madho\OneDrive\Desktop\index.php - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

accept-request.php reject-request.php add-donor.php process-add-donor.php view-blood-stock.php about.php save_feedback.php view-ratings.php delete-rating.php db.sql index.php

```
1 <html>
2 <head>
3     <meta charset="UTF-8">
4     <meta name="viewport" content="width=device-width, initial-scale=1.0">
5     <title>Blood Donation</title>
6
7     <!-- for page animation -->
8     <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/aos/2.3.4/aos.css">
9
10    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.2/css/all.min.css">
11    <style>
12
13
14    </style>
15
16 </head>
17
18 <body>
19
20     <div id="content">
21         <?php require("nav.html"); ?>
22         <main>
23             <section id="video-section">
24                 <video autoplay muted loop>
25                     <source src="videos/mainvideo.mp4" type="video/mp4">
26                     Your browser does not support the video tag.
27                 </video>
28             </section>
29             <section id="info" style="background: linear-gradient(to right, #ff9a9e, #fad0c4); data-aos="fade-out" data-aos-duration="2500">
30                 <div class="info-image" data-aos="fade-right" data-aos-duration="2500">  </div>
31                 <div class="info-text" data-aos="fade-left" data-aos-duration="2500">
32
33             </div>
34         </section>
35     </div>
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File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
accept-request.php reject-request.php add-donor.php process-add-donor.php view-blood-stock.php about.php save_feedback.php view-ratings.php delete-rating.php db.sql index.php

337 <form action="save_feedback.php" method="POST">
338     <input type="text" name="name" placeholder="Your Name" required>
339     <input type="email" name="email" placeholder="Your Email" required>
340     <textarea name="message" placeholder="Your Feedback" rows="4" required></textarea>
341     <div class="rating">
342         <input type="radio" name="rating" id="star1" value="5"><label for="star1">★</label>
343         <input type="radio" name="rating" id="star2" value="4"><label for="star2">★</label>
344         <input type="radio" name="rating" id="star3" value="3"><label for="star3">★</label>
345         <input type="radio" name="rating" id="star4" value="2"><label for="star4">★</label>
346         <input type="radio" name="rating" id="star5" value="1"><label for="star5">★</label>
347     </div>
348     <button type="submit" style="margin-top:20px; margin-left:10px;">Submit Feedback</button>
349 </form>
350 </div>
351 <section id="about" data-aos="zoom-in" data-aos-duration="1500">
352     <h2>About Us</h2>
353     <p>We are committed to saving lives through blood donations.</p>
354 </section>
355 </main>
356 <a name="home"> </a>
357
358 <footer style="background-color: #333; color: white; text-align: center; padding: 20px;">
359
360     <p style="font-size: 18px; font-weight: bold;">
361         Developed by: Madhur Goyal, Aryan, Lakshdeep <br>
362         © 2025 Blood Donation. All rights reserved.
363     </p>
364     <p>Contact us: <a href="mailto:madhoorgoyal@gmail.com" style="color: #ff5757; text-decoration: none;">madhoorgoyal@gmail.com</a></p>
365     <div style="margin-top: 10px; font-size: 24px;">
366         <a href="https://www.instagram.com/madhurgoyal2403" target="_blank"
367             <i class="fab fa-instagram" style="color: #E4405F; margin: 0 15px;"></i>
368         <a href="https://www.facebook.com/madhurgoyal" target="_blank" style="color: #1877F2; margin: 0 15px;">
369             <i class="fab fa-facebook" style="color: #E4405F; margin: 0 15px;"></i>
370         <a href="https://twitter.com/@MadhurG54915884" target="_blank" style="color: #1DA1F2; margin: 0 15px;">
371             <i class="fab fa-twitter" style="color: #E4405F; margin: 0 15px;"></i>
372         <a href="https://www.linkedin.com/in/Madhur Goyal" target="_blank"
373             <i class="fab fa-linkedin" style="color: #0A66C2; margin: 0 15px;"></i>
374     </div>
375
376     <!-- Back to Top Button -->
377     <div style="margin-top: 20px;">
378         <button onclick="scrollToTop()" style="background-color: #ff5757; color: white; border: none; padding: 10px 20px; border-radius: 5px; cursor: pointer;">
379             Back to Top !
380         </button>
381     </div>
382 </footer>
383
384 <script>
385     function scrollToTop() {
386         window.scrollTo({ top: 0 });
387     }
388 </script>
389
390 </div>
391 <!-- for page animation -->
392 <script src="https://cdnjs.cloudflare.com/ajax/libs/aos/2.3.4/aos.js">
393     AOS.init();
394 </script>
395 </body>
396 </html>
```

```
C:\Users\madho\OneDrive\Desktop\index.php - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
accept-request.php reject-request.php add-donor.php process-add-donor.php view-blood-stock.php about.php save_feedback.php view-ratings.php delete-rating.php db.sql index.php

368 <a href="https://www.instagram.com/madhurgoyal2403" target="_blank"
369     style="color: #E4405F; margin: 0 15px;">
370     <i class="fab fa-instagram" style="color: #E4405F; margin: 0 15px;"></i>
371 </a>
372 <a href="https://www.facebook.com/madhurgoyal" target="_blank" style="color: #1877F2; margin: 0 15px;">
373     <i class="fab fa-facebook" style="color: #E4405F; margin: 0 15px;"></i>
374 </a>
375 <a href="https://twitter.com/@MadhurG54915884" target="_blank" style="color: #1DA1F2; margin: 0 15px;">
376     <i class="fab fa-twitter" style="color: #E4405F; margin: 0 15px;"></i>
377 </a>
378 <a href="https://www.linkedin.com/in/Madhur Goyal" target="_blank"
379     style="color: #0A66C2; margin: 0 15px;">
380     <i class="fab fa-linkedin" style="color: #E4405F; margin: 0 15px;"></i>
381 </a>
382 </div>
383
384     <!-- Back to Top Button -->
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386         <button onclick="scrollToTop()" style="background-color: #ff5757; color: white; border: none; padding: 10px 20px; border-radius: 5px; cursor: pointer;">
387             Back to Top !
388         </button>
389     </div>
390 </footer>
391
392 <script>
393     function scrollToTop() {
394         window.scrollTo({ top: 0 });
395     }
396 </script>
397
398 </div>
399 <!-- for page animation -->
400 <script src="https://cdnjs.cloudflare.com/ajax/libs/aos/2.3.4/aos.js">
401     AOS.init();
402 </script>
403 </body>
404 </html>
```

Testing and Implementation

Testing

Testing is an essential phase in the software development lifecycle. It ensures that the system performs as expected and is free from bugs or errors. For the Blood Donation Website, several testing methods were used to validate the functionality, performance, and usability of the system.

1. Unit Testing

Unit testing was performed on individual modules like:

- **User Registration & Login** – Checked for valid and invalid inputs, empty fields, and authentication checks.
- **Blood Request Form** – Tested submission, validation of required fields, and error handling.
- **QR Code Display Page** – Verified proper display of QR code and static content.
- **Admin Panel** – Verified admin actions like accept/reject blood requests, delete donor, and update records.

Each function was tested independently to ensure it worked as intended.

2. Integration Testing

Integration testing was conducted to ensure that different modules interact smoothly:

- Ensured proper redirection after login for donor, recipient, and admin.
- Verified database connection and data flow from front end to back end.
- Tested request status changes after admin approval/rejection.

3. System Testing

System testing verified the end-to-end functionality of the website: Simulated complete scenarios like registering a donor, requesting blood, approving requests by admin, etc. Verified data persistence in the MySQL database.

4. User Acceptance Testing (UAT)

To evaluate user-friendliness and functionality:

Test users were asked to use the platform and provide feedback.

- Confirmed ease of navigation, readability, and form usability.
- Resolved minor issues related to form validation and feedback messages.

5. Security Testing

Basic security validations were implemented to protect data: Restricted admin access with login authentication.

Implementation

The implementation phase involves deploying the project for actual usage. For this project, implementation was carried out in several steps:

1. Environment Setup

- WAMP was used as the local server environment (Apache + MySQL + PHP).
- HTML, CSS, and JavaScript files were written using VS Code.
- MySQL was used to create and manage the database using phpMyAdmin.

2. Database Configuration

- Created tables for:
- Donors
- Deleted donors
- Requests
- Feedback
- Set primary keys, foreign keys, and appropriate data types.
- Established connections using mysqli_connect() in PHP.

3. Deployment on Localhost

- All source code files were placed in the www folder of WAMP.
- The database was imported via phpMyAdmin.
- The application was accessed via localhost/Blood_donation/

4. Testing with Real Data

- Sample data was entered for donors and recipients.
- Blood requests were made and verified through the admin panel.
- The request status was updated and verified on the user dashboard.
- QR code was displayed correctly on the contribution page.

5. Final Review and Documentation

- Conducted a final review of all features.
- Prepared screenshots of output screens for documentation.
- Documented known limitations and areas of improvement.

OUTPUT SCREENS

The screenshot shows the homepage of a blood donation website. The header features a red navigation bar with the title "Blood Donation" and links for Home, Donate Blood, Request Blood, Contribute, Feedback, About, and Admin. Below the header is a large red banner with the text "GIVE A PRICELESS DONATION" in white. To the right of the text is a close-up image of several blue-tipped test tubes filled with dark liquid (blood) held by a person in a blue glove. In the top right corner of the banner is a logo with a heart and the text "BLOOD DONATION". The footer of the page includes a link to register as a donor and a "click here" button, along with standard browser icons and system status indicators.

The screenshot shows a section of the website titled "Who can donate?". It features a collage of five illustrations: a smiling man, a person's arm being drawn, a smiling young man, an elderly man with glasses, and a smiling woman. Below the collage, the text reads: "Blood donation is a simple, safe process that saves lives. Anyone who is healthy, at least 17 years old, and weighs at least 110 pounds may donate blood every 56 days. Here are some key points:" followed by a bulleted list. The list includes: "Blood donations help millions of patients in need.", "The donation process is quick and easy.", "Donors can donate whole blood, platelets, or plasma.", and "Regular blood donors are critical to maintaining an adequate blood supply." The footer of the page includes a weather icon for air quality, standard browser icons, and system status indicators.

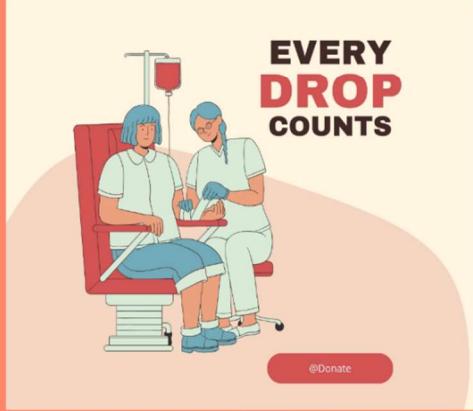
Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

Benefits of Blood Donation

Blood donation is a selfless act that can save lives. Here are some benefits of donating blood:

- It helps save lives by providing blood to those in need.
- Donating blood can improve your cardiovascular health.
- It can reduce the risk of cancer and other diseases.
- Blood donation helps in maintaining a healthy iron level in your body.
- It provides a sense of satisfaction and fulfillment, knowing that you have helped someone in need.



Air: Poor Now

Search Home Donate Blood Request Blood Contribute Feedback About Admin

1:10 PM 4/4/2025

Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

BLOOD DONORS ARE LIFE-SAVERS.

SAVE A LIFE, GIVE YOUR BLOOD.



Blood Donation Process

The blood donation process is simple and safe. Here are the steps involved:

- Registration: You will need to provide some basic information and complete a health history questionnaire.
- Health Check: A healthcare professional will check your blood pressure, pulse, temperature, and hemoglobin levels.
- Donation: A sterile needle is used to collect blood from a vein in your arm. The process takes about 10-15 minutes.
- Refreshments: After donating, you will be given refreshments to help your body recover.
- Rest: You may be asked to sit and relax for a few minutes before leaving the donation center.

DONATE NOW

95°F Mostly cloudy

Search Home Donate Blood Request Blood Contribute Feedback About Admin

4:13 PM 4/5/2025

Blood Donation

localhost/mblood/

Home Donate Blood Request Blood Contribute Feedback About Admin

Give Your Feedback

Your Name

Your Email

Your Feedback

★★★★★

Submit Feedback

Air: Poor Now

Search

1:10 PM 4/4/2025

Blood Donation

localhost/mblood/

Home Donate Blood Request Blood Contribute Feedback About Admin

Submit Feedback

About Us

We are committed to saving lives through blood donations.

Developed by: Madhur Goyal, Aryan, Lakshdeep
© 2025 Blood Donation. All rights reserved.

Contact us: madhoorgoyal@gmail.com

Back to Top ↑

Air: Poor Now

Search

1:10 PM 4/4/2025

Donate Blood

localhost/mblood/donate-blood.php

Blood Donation

Donate Blood

Full Name
Email
Phone Number
Gender
Age
Blood Type
Last Donation Date
Preferred Donation Date
Any disease, If yes then specify
Donate

Air: Poor Now

Search

1:11 PM 4/4/2025

Request Blood

localhost/mblood/request-blood.php

Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

Select Blood Group

Blood Group
Select blood group

Search

Check Request Status

Air: Poor Now

Search

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Check Request Status

localhost/mbllood/check-status.php

Image map tag Free Online Image... (2) WhatsApp How To Create a To... my information Bill SQLcl Downloads PDF to JPG - Conver... Mock typing test on... All Bookmarks

Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

Check Request Status

Phone Number

Blood Type

Select blood group

Check Status

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Donate Money

localhost/mbllood/donate-money.php

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Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

Donate Money

Scan the QR code below to make a donation and support our blood donation organization.



Scan to pay with any UPI app

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About - Blood Donation

localhost/mblood/about.php

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Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

About Blood Donation

5 Total Donors

3 Total Requests

Blood Donation

Blood Request

Blood Availability Search

Admin Panel

Air: Poor Now

Search

ENG US

1:11 PM 4/4/2025

About - Blood Donation

localhost/mblood/about.php

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Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin

LEARN ABOUT DONATION

Donating blood regularly keeps your blood healthy and replenishes your system. It can help save lives and improve overall health.

TYPES OF DONATION

Packed Red Blood Cells - Used for severe anemia

Plasma - Used for clotting disorders

Platelet - Used for cancer treatments

Air: Poor Now

Search

ENG US

1:11 PM 4/4/2025

Blood Donation

Home Donate Blood Request Blood Contribute Feedback About Admin



BLOOD COMPATIBILITY

Blood Type	Donate To	Receive From
A+	A+, AB+	A+, A-, O+, O-
B+	B+, AB+	B-, B-, O+, O-
O+	O+, A+, B+, AB+	O+, O-
AB+	AB+	Everyone
A-	A-, AB-, AB-	A-, O-
B-	B-, AB-, AB-	B-, O-
AB-	AB-, AB-	AB-, A-, B-, O-
O-	Everyone	O-

Air: Poor Now Search Start button Taskbar icons Language: ENG US Date: 4/4/2025

Admin Login

Home

Admin Login

Username

Password

Login

Air: Poor Now Search Start button Taskbar icons Language: ENG US Date: 4/4/2025

Admin Dashboard

localhost/mblood/admin-dashboard.php

Home Logout

Admin Dashboard

[View Donors](#) [View Requests](#) [View Blood Stock](#) [View Ratings](#) [Add Donor](#)

Contact us on WhatsApp

Air: Poor Now

Search bar and taskbar icons at the bottom.

Admin Dashboard

localhost/mblood/admin-dashboard.php

Image map tag Free Online Image... (2) WhatsApp How To Create a To... my information Bill SQLcl Downloads PDF to JPG - Conver... Mock typing test on... All Bookmarks

Admin Dashboard

[View Donors](#) [View Requests](#) [View Blood Stock](#) [View Ratings](#) [Add Donor](#)

Donors

Name	Email	Phone	Gender	Age	Blood Type	Last Donation Date	Preferred Donation Date	Actions
Madhur Goyal	madhurgoyal783@gmail.com	09815658832	male	20	A-	2025-01-07	2025-03-05	Delete
aryan	aryan@gmail.com	1234565	other	20	AB-	2025-03-03	2025-03-06	Delete
Madhur Goyal	madhurgoyal783@gmail.com	12345	male	22	AB+	2025-02-24	2025-03-20	Delete
edde	ded@gmail.com	233333	male	23	B+	2025-03-18	2025-03-19	Delete

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Tomorrow's high Tie record

Search bar and taskbar icons at the bottom.

Admin Dashboard

localhost/mblood/admin-dashboard.php

View Donors | View Requests | View Blood Stock | View Ratings | Add Donor

Blood Requests

Name	Email	Phone	Gender	Age	Blood Type Needed	Hospital Name	Reason	Preferred Delivery Date	Actions
Madhurwsx	madhurgoyal783@gmail.com	09815658832	male	20	O-	sec 16	hello	2025-04-09	Accepted Delete
Madhur Goyal	madhurgoyal783@gmail.com	09815658832	male	20	A+	asjb	qdas	2025-03-19	Accepted Delete
Madhur Goyal	madhurgoyal783@gmail.com	09815658832	male	20	A-	sec 16	emergency	2025-04-25	Accept Reject Delete
lakshay	lakshay@gmail.com	123456	female	21	AB+	sec 16	suffering from these	2025-03-13	Rejected Delete

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Admin Dashboard

localhost/mblood/admin-dashboard.php

View Donors | View Requests | View Blood Stock | View Ratings | Add Donor

Admin Dashboard

Total Donations by Blood Type

Blood Type	Total Donations
A-	1
AB-	1
AB+	1
B+	1
A+	1

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Admin Dashboard

[View Donors](#) [View Requests](#) [View Blood Stock](#) [View Ratings](#) [Add Donor](#)

Blood Requests

Id	Name	Email	Rating	Message	Action
8	Madhur Goyal	madhurgoyal783@gmail.com	5	nice website	Delete
9	john	john@gmail.com	4	Please also add the location system	Delete

[Contact us on WhatsApp](#)



Admin Dashboard

[View Donors](#) [View Requests](#) [View Blood Stock](#) [View Ratings](#) [Add Donor](#)

Add Donor

Full Name

Email

Phone Number

Gender

Age

Blood Type

Last Donation Date

Preferred Donation Date

[Contact us on WhatsApp](#)



Conclusion

The Blood Donation Website has been successfully developed as a user-friendly platform that bridges the gap between blood donors and recipients. Through the use of modern web technologies like HTML, CSS, JavaScript, PHP, and MySQL, the system efficiently manages donor registrations, blood requests, and administrative approvals, while also allowing users to contribute financially to the cause.

This project addresses one of the critical needs in the healthcare sector—timely access to blood during emergencies. By offering features like donor listing, blood availability checks, request status tracking, and an admin control panel, the platform ensures transparency, organization, and accessibility. It eliminates the manual efforts traditionally associated with blood donation and creates a digital space where users can participate in saving lives.

The admin module enhances the system's reliability by verifying donors and managing requests, which helps prevent misuse and ensures that the data remains authentic. Furthermore, the contribution section with a displayed QR code adds another meaningful way for users to support blood donation drives.

Throughout the development and testing phases, the system performed reliably under various scenarios, proving that it can be deployed and used effectively in real-life situations. The overall response from users during testing was positive, highlighting the simplicity, clarity, and usefulness of the platform.

In conclusion, this project not only fulfills the academic requirements but also contributes to a noble social cause. It sets the foundation for future enhancements like automated email/SMS alerts, geolocation-based donor searches, and mobile application integration. The Blood Donation Website stands as a practical and impactful solution toward improving the efficiency of blood donation services.

Future Scope

While the current version of the Blood Donation Website provides a solid foundation for connecting donors and recipients, there are several areas where the platform can be expanded and enhanced in the future to improve its functionality, accessibility, and overall impact. Below are some of the key future developments that can be considered:

1. Mobile Application Development

To increase accessibility and convenience, a dedicated mobile application for Android and iOS can be developed. This will allow users to register, request blood, track status, and receive updates directly from their smartphones, even in low-connectivity areas.

2. SMS and Email Notification System

An automated notification system can be integrated to send real-time alerts to donors and recipients. This will include reminders for eligible donors, urgent blood requirement notifications, and status updates for recipients regarding their requests.

3. Geolocation-based Donor Search

The system can be enhanced to show nearby available donors using Google Maps or other geolocation services. This will allow recipients to quickly find the closest donor within their vicinity, especially useful during emergencies.

4. Blood Stock Management for Hospitals

The platform can be integrated with local hospitals and blood banks to maintain and display real-time information about available blood stock. This can help reduce delays in sourcing blood and increase hospital collaboration.

6. Eligibility Check Automation

Currently, donor eligibility may be manually assessed. In the future, a self-assessment questionnaire with real-time validation can be added to automatically determine if a donor is eligible to donate blood based on health and donation history.

7. Advanced Admin Dashboard

An improved admin panel with detailed analytics, visual reports, donor activity history, request frequency, and donation trends will make management more efficient and insightful.

Bibliography

The following resources and references were used during the planning, design, and development phases of the Blood Donation Website project:

Websites and Online References

- W3Schools – <https://www.w3schools.com> *(For learning and implementing HTML, CSS, JavaScript, and PHP basics)*
- PHP Manual – <https://www.php.net/manual/en/> *(Official PHP documentation for server-side scripting and functions)*
- MySQL Documentation – <https://dev.mysql.com/doc/> *(Reference for database structure and SQL queries)*
- GeeksforGeeks – <https://www.geeksforgeeks.org>

Images and Icons

- font-awesome – <https://www.fontawesome.com> *(For icons and illustrations used on the website)*
- Canva – <https://www.canva.com> *(Used for images in UI design)*