



People's Democratic Republic of Algeria  
Ministry of Higher Education and  
Scientific Research  
Hassiba Benbouali University of Chlef  
Faculty of Computer Sciences

**FINAL TP WEB DEV**  
**Blood Donations management system**



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Academic year : 2023 / 2024

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## 1. Introduction

In the realm of modern healthcare, the symbiotic relationship between blood donors and laboratory facilities stands as a cornerstone of lifesaving medical interventions. However, the traditional methods of managing this intricate relationship often fall short in meeting the demands of an ever-evolving healthcare landscape. Recognizing this imperative need for innovation, our project endeavors to introduce a groundbreaking solution in the form of a web application.

## 2. Concept of the Application

### a. Project Overview

This web application represents more than just a technological advancement; it embodies a commitment to revolutionizing the way blood donations and laboratory analyses are managed within a given region, specifically within a wilaya. Our vision is clear: to optimize and streamline the processes involved in blood donation management and laboratory analyses, thereby enhancing the efficiency and effectiveness of coordination between donors and laboratory facilities.

### b. Project Objectives

Our project aims to revolutionize blood donation management and laboratory analyses within a specific wilaya by achieving the following objectives:

- **Facilitate Communication:** Develop a user-friendly web application to foster efficient communication between blood donors and a public laboratory, enabling real-time interactions.
- **User Interface Development:** Create three distinct web pages tailored for different user roles (visitor, donor, laboratory) to ensure seamless navigation and functionality.
- **Laboratory Presentation:** Provide comprehensive information about the laboratory, including its location and other pertinent details, to enhance transparency and accessibility.
- **Donor Management:** Enable streamlined donor management processes, including addition, search, removal, and modification of donor information, to optimize data management.
- **Donation Recording:** Implement a system to accurately record blood donation operations for each donor, ensuring traceability and accountability in the blood supply chain.

- **Data Display:** Develop functionalities to display blood donations between specified dates and by blood group, providing valuable insights for decision-making and resource allocation.
- **Feedback Mechanism:** Incorporate a feedback mechanism for users to comment on and rate the quality of service provided by the laboratory, promoting transparency and continuous improvement.

By achieving these objectives, we aim to overcome the challenges inherent in traditional blood donation management methods and establish a more seamless and integrated approach that upholds the highest standards of accuracy, reliability, and patient care.

### 3. Implementation of the Application

#### a. Technologies Used

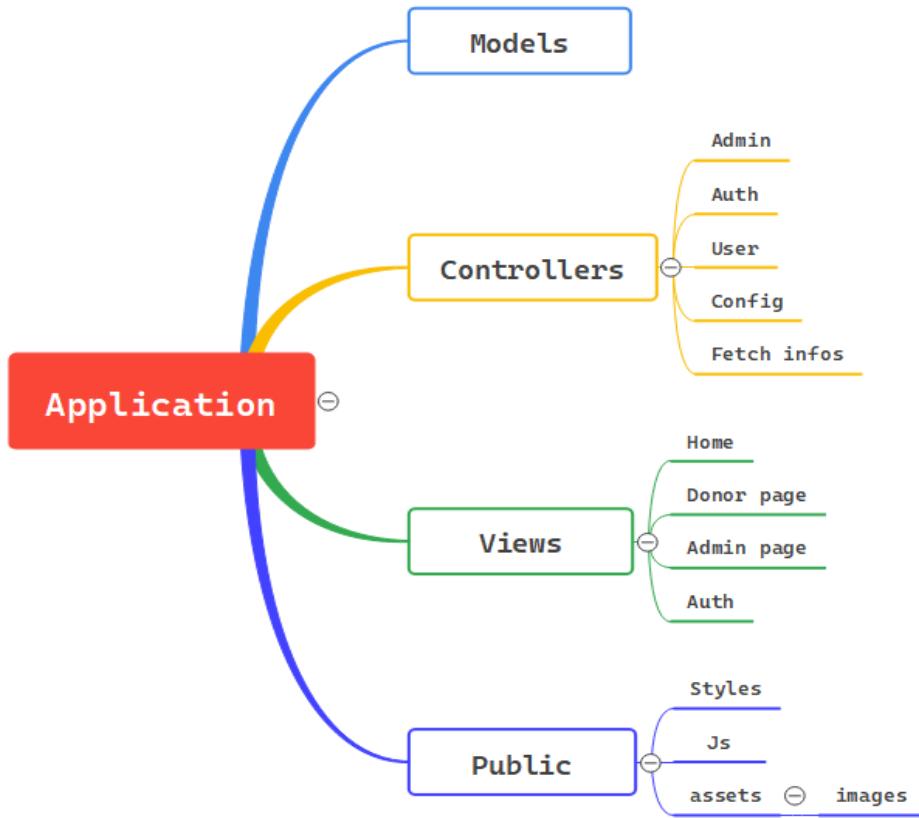
To realize the vision, I harness a diverse array of technologies, each carefully selected to ensure the robustness and scalability of the web application. The technological arsenal includes **HTML**, **CSS**, and **JavaScript** for **frontend development**, **PHP** for **backend** functionality, and **SQL** (specifically MySQL) for **database management**.



#### b. App Structure and Design

The web application is structured based on the **Model-View-Controller (MVC)** architectural pattern, which provides a clear separation of concerns and enhances maintainability and scalability. The **MVC** architecture divides the application into three interconnected components:

## b.1. Code Architecture:



### 1. Models:

The Models folder contains **SQL** scripts defining the database schema for essential entities, ensuring the integrity and functionality of the application's database:

#### 1. Donors (**donors.sql**):

- Defines attributes such as id, name, email, password, address, blood\_group, phone, profilePicture, created\_by, created\_at, and updated\_at for the "**DONORS**" table.
- Enforces constraints for email uniqueness, and blood\_group and phone format.

#### 2. LabEmployee (**labEmployee.sql**):

- Specifies fields like ID, name, email, password, address, blood\_group, phone, profilePicture, created\_at, and updated\_at for the "**LABEMPLOYEE**" table.
- Ensures uniqueness for email addresses and includes check constraints for blood\_group and phone.

#### 3. Donations (**donations.sql**):

- Constructs columns such as id, donation\_date, donation\_place, blood\_group, title, description, donation\_image, created\_by, and created\_at for the "**DONATIONS**" table.

- Establishes a foreign key referencing the LABEMPLOYEE table for created\_by.

#### **4. Comments (comments.sql):**

- Defines fields like id, donor\_id, donation\_id, profilePicture, name, comment, rating, is\_general, and created\_at for the "**COMMENTS**" table.

- Establishes foreign keys referencing the DONORS and DONATIONS tables.

#### **5. Donation Records (donation\_records.sql):**

- Specifies attributes such as id, donor\_id, donation\_id, blood\_group, and created\_at for the "**DONATION\_RECORDS**" table.

- Includes foreign keys referencing the DONORS and DONATIONS tables.

## **2. Views:**

Views are responsible for presenting the user interface elements to users, offering an intuitive and visually engaging experience. Within the Views folder, four subfolders organize different aspects of the user interface:

**1. Home Folder:** Houses pages accessible to all users, providing details about the laboratory's services, location, and additional information. It includes:

- **Home page.html:** The main landing page welcoming users to the application.
- **services.html:** Offers information about the services provided by the laboratory.
- **about.php:** Presents details about the laboratory and its mission.
- **contact.html:** Provides contact information for the laboratory.
- **privacy.html:** Outlines the privacy policy of the application.

**2. Auth Folder:** Contains pages related to user authentication and profile management, including:

- **login.php:** Allows users to log into the system.
- **register.php:** Enables users to register for an account.
- **DonatePage.php:** Provides a page for donors to make donations.
- **updateProfile.php:** Allows users to update their profile information.

**3. Donor Page Folder:** Contains pages specifically tailored for donors, facilitating donation management and interaction. It includes:

- **donor.php:** Displays a dashboard for donors to manage donations and view their history.
- **display\_donations.php:** Shows a list of donations made by the donor.
- **add\_comments.php:** Allows donors to add comments and feedback.

**4. Admin Page Folder:** Houses pages for administrative tasks and management functions. It includes:

- **admin.php**: Provides an administrative dashboard for managing donations and donors.
- **create\_donation.php**: Enables administrators to create new donation records.
- **add-donor.php**: Allows administrators to add new donors to the system.

### **3. Controllers:**

The Controllers serve as intermediaries between the **models** and **views**, facilitating user input processing, logic orchestration, and communication between different components of the application. They ensure smooth interaction and functionality within the system, promoting a seamless user experience. In my application this folder is structured into **three** subfolders and **two** PHP files, each handling specific aspects of user interaction and application logic:

#### **1. Admin Folder:**

- **add-donor.php**: Manages the addition of new donors to the system.
- **create-donation.php**: Orchestrates the creation of new donation records.
- **delete-donor.php**: Handles the deletion of donor records.
- **display\_by\_blood\_type.php**: Retrieves and displays donors based on their blood type.
- **display\_donors.php**: Retrieves and displays a list of donors.
- **search\_donor.php**: Facilitates the search for donors within the system.

#### **2. Auth Folder:**

- **login.php**: Handles user login functionality.
- **logout.php**: Manages user logout operations.
- **register.php**: Facilitates user registration.
- **register\_donation.php**: Orchestrates the registration of new donations.
- **updateInfos.php**: Manages the update of user information(donor or labEmployee).

#### **3. User Folder:**

- **add-comment.php**: Handles the addition of comments by donors(general or related to a donation post).
- **display\_comments.php**: Retrieves and displays comments(general or related to a donation post).
- **display\_donations.php**: Retrieves and displays donations created by labEmployee.
- **display\_latest.php**: Retrieves and displays the **three latest donation posts**.

### **4. Public Folder:**

The Public folder serves the purpose of organizing **assets**, **JavaScript** files, and **CSS**

stylesheets that contribute to the visual presentation and functionality of the web application. These resources are essential for enhancing user experience, providing a visually appealing interface, and ensuring smooth interaction within the application.

### **1. Assets Folder:**

- Contains the "**images**" subfolder, housing images utilized throughout the project to enrich the visual experience.

### **2. JS Folder:**

- **admin.js**: Manages administrative functionalities, including toggling the sidebar, implementing light and dark mode, and handling profile picture interactions.
- **nav.js**: Manages navigation-related operations, including showing and hiding the navigation sidebar for the responsive navbar styling.
- **profile.js**: Controls user profile-related interactions, allowing users to view and update their profile information.
- **script.js**: Handles various client-side functionalities, such as updating progress on scroll and resizing events, specifically tailored for enhancing the appearance of the donation progress part on the "About Us" page within the "Home" folder.
- **swiper.js**: Implements swiper functionality for **carousel** elements, enabling **smooth navigation** through content, particularly utilized for the testimonial section on the "About Us" page within the "Home" folder.

### **3. Style Folder:**

- **Donates.css**: defining styles specific to the **donation progress** section in the "About Us" page within the "Home" folder .
- **donor.css**: providing styles tailored for donor-related pages.
- **labEmpl.css**: containing styles customized for laboratory employee-related pages.
- **main.css**: containing global styles applicable across multiple pages.
- **register.css**: defining styles for the registration page and the auth pages.
- **styles.css**: housing general styles applicable throughout the application.
- **swiper.css**: containing styles for swiper elements, used for carousel functionality.

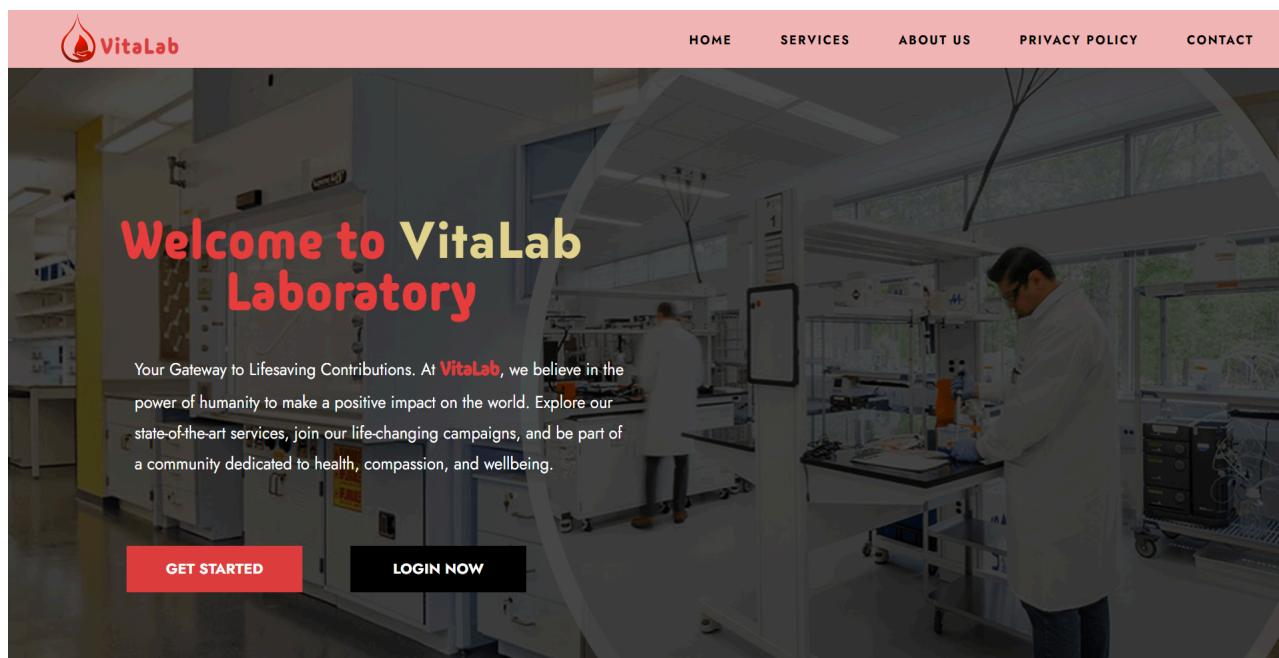
#### **b.2. Pages of the application and the functionality of the website:**

Our web application consists of several **pages** organized within the **MVC** structure, each of them has its own functionality within the application.

Before accessing the home page of our project, it's essential to first start **XAMPP**, which serves as our local server environment. XAMPP allows us to simulate a web server on our machine, enabling us to develop and test our PHP application locally before deploying it to a live server. Once XAMPP is started, we can proceed to navigate to the home page of our application and interact with its various functionalities. :



- **Home Page (Views/Home/Home page.html)**



The home page Located in the "**Home**" folder within the "**Views**" directory, this file serves as the index file of the application (like the entry point of the app).It contains a welcome section to the **VitaLab** laboratory and buttons to navigate to the login page (Login now button) or About page (Get started button) also it includes a navigation bar at the top.

The navigation bar allows users to access various pages of the application, including: **Services** page, **About us** page , **Contact us** page , **privacy & policy** page.Let's delve into the details:

- **HTML Structure:**

- The HTML structure is straightforward, consisting of a navigation bar (nav) and a home

content section (homeContent).

- The navigation bar contains the VitaLab logo, navigation links, and icons for menu toggling.
- The home content section includes a welcoming message, introductory text, and buttons for further actions.

### **Navigation Bar:**

- The navigation bar is styled with a vibrant color scheme, featuring a distinctive pink background.
- It includes the VitaLab logo on the left, providing branding and visual recognition.
- Navigation links are presented as a horizontal list (ulMenu) on desktop screens and as a collapsible sidebar on smaller devices.
- Icons for toggling the sidebar menu are included, enhancing mobile usability.

### **Home Content:**

- The home content section greets visitors with a prominent heading, "Welcome to VitaLab Laboratory," emphasizing the brand name.
- A descriptive paragraph introduces VitaLab's mission and values, emphasizing the power of humanity to create positive change.
- Two action buttons, "Get started" and "Login Now," encourage user engagement and prompt further exploration of the website.

- **CSS Styling:**

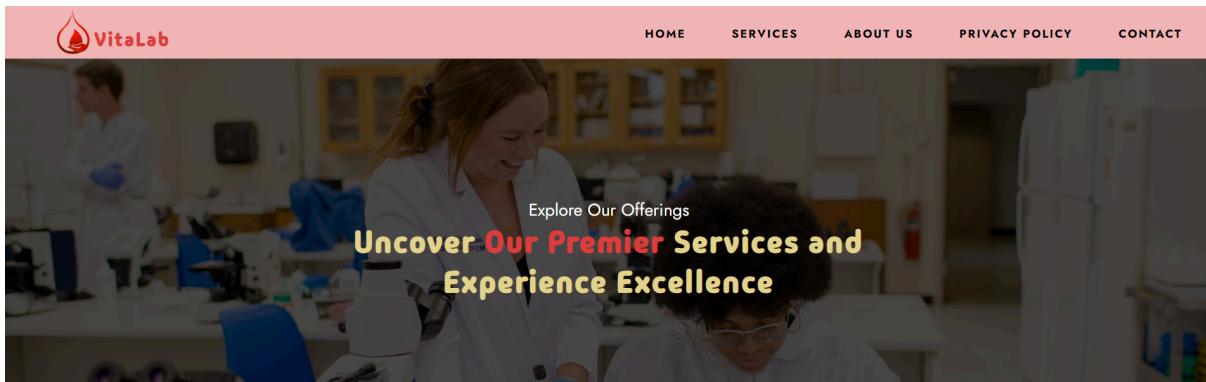
- CSS variables are utilized to maintain consistency and facilitate easy customization of colors, fonts, and other design elements.
- Global styles define typography, scrollbar appearance, and button formatting, ensuring a cohesive visual experience across the site.
- Media queries are employed for responsive design, ensuring optimal display on various devices. The navigation bar transforms into a collapsible sidebar on smaller screens for improved usability.
- Our CSS styling incorporates the latest features of **CSS3**, notably leveraging **nested CSS** for efficient styling management. This approach allows us to encapsulate styles within specific elements, maintaining a clear and structured hierarchy within our style sheets. For instance, in styling the navigation bar, we utilize nested CSS to define unique styles for elements such as navigation links (& a) and toggle icons (& .hamburger, & .closeIcon), ensuring a cohesive and visually appealing design.

- **JavaScript Functionality:**

- The navigation bar's responsive behavior is powered by JavaScript functions defined in

the nav.js file. These functions enable the toggling of the navigation sidebar, enhancing the mobile navigation experience. Click events are utilized to show and hide the sidebar menu, providing intuitive interaction for users. This JavaScript logic ensures seamless navigation across various devices, making the navigation bar a standard feature for our responsive site.

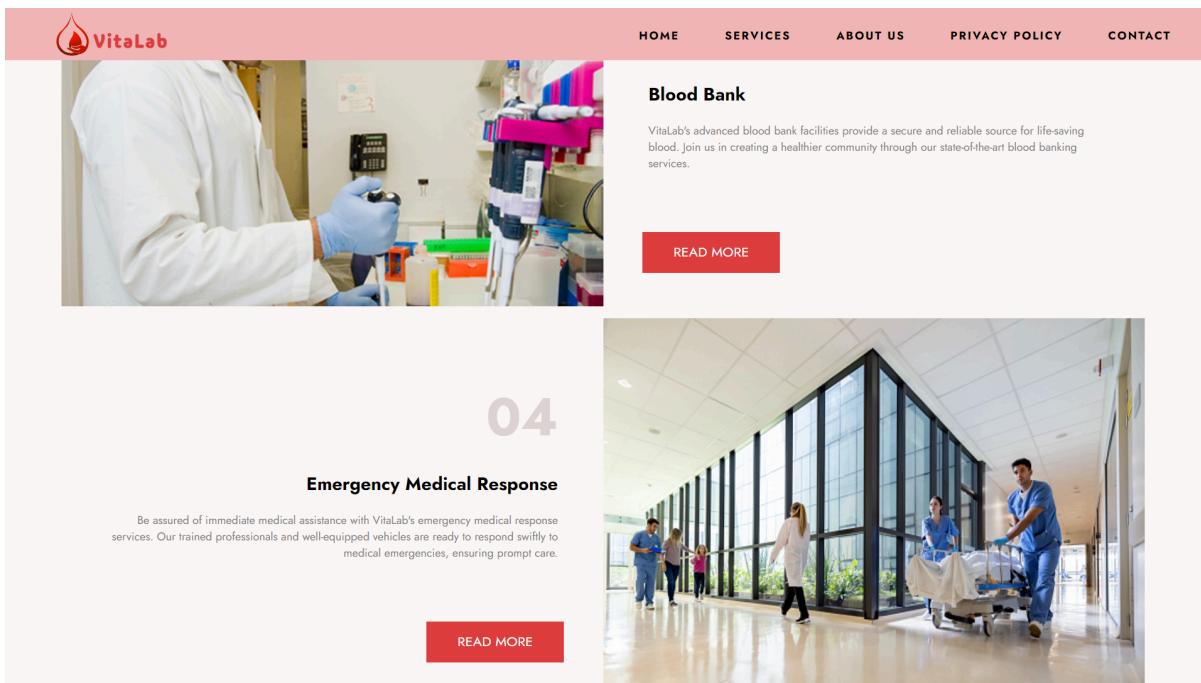
- **Services Page (Views/Home/services.html)**



This section is titled "01" and features the heading "Blood Donation". It includes a photograph of a medical professional in a dark blue uniform and mask assisting a patient in a black tank top with a face mask. Below the photo is a brief description: "Experience the seamless process of contributing to a noble cause. Your blood donation journey with VitaLab is not just impactful but also surrounded by care and professionalism." A red "READ MORE" button is located at the bottom left of the section.

This section is titled "02" and features the heading "Health Check". It includes a photograph of a medical professional in a white uniform and mask performing a physical examination on a patient seated in a green chair. Below the photo is a brief description: "Our comprehensive health check services go beyond routine examinations. VitaLab ensures your well-being through accurate assessments, emphasizing your health as our top priority." A red "READ MORE" button is located at the bottom left of the section.

This section is titled "03" and features the heading "Blood Bank". It includes a photograph of a medical professional in a white uniform working in a laboratory setting, surrounded by equipment and supplies. Below the photo is a brief description: "VitaLab's advanced blood bank facilities provide a secure and reliable source for life-saving blood. Join us in creating a healthier community through our state-of-the-art blood banking services." A red "READ MORE" button is located at the bottom left of the section.



**04**

### Blood Bank

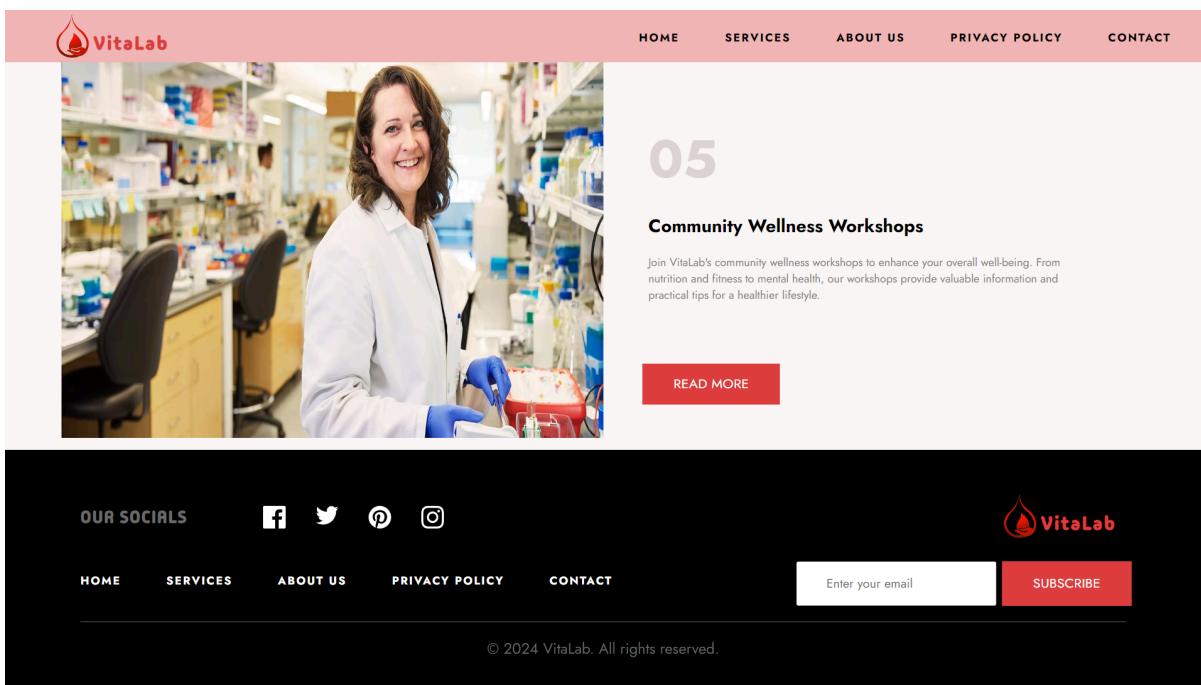
VitaLab's advanced blood bank facilities provide a secure and reliable source for life-saving blood. Join us in creating a healthier community through our state-of-the-art blood banking services.

[READ MORE](#)

**Emergency Medical Response**

Be assured of immediate medical assistance with VitaLab's emergency medical response services. Our trained professionals and well-equipped vehicles are ready to respond swiftly to medical emergencies, ensuring prompt care.

[READ MORE](#)



**05**

### Community Wellness Workshops

Join VitaLab's community wellness workshops to enhance your overall well-being. From nutrition and fitness to mental health, our workshops provide valuable information and practical tips for a healthier lifestyle.

[READ MORE](#)

**OUR SOCIALS**

[HOME](#) [SERVICES](#) [ABOUT US](#) [PRIVACY POLICY](#) [CONTACT](#)

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The "**Services**" web page effectively presents **VitaLab's** range of services in a visually appealing and user-friendly manner, encouraging visitors to explore further and engage with the laboratory's offerings. here you can find the code [services page](#)

- **HTML Structure:**

- The HTML structure follows a similar pattern to the home page, with a navigation bar (nav) and a section for displaying services.
- Navigation links allow users to navigate between different sections of the website(we talk about it in the home page).

## **Our Services Section:**

- The "**Our Services**" section showcases VitaLab's offerings through a series of **articles**. Each article represents a specific service provided by **VitaLab**, accompanied by an image, title, description, and a "Read More" button. The section provides a visually appealing layout with alternating background colors for better readability.

## **Footer:**

The footer section of our website serves as a **vital** component, encapsulating essential information such as the **VitaLab** logo, social media links, navigation options, subscription functionality, and copyright details. Structured into two sections within the HTML, it features the logo, social links, and navigation in the first section, while the second section contains a subscription form and copyright information. Employing **nested CSS**, we ensure consistent styling across elements like social links, subscription components, and copyright notices. Designed for **reusability**, the footer maintains consistency across pages, facilitating seamless integration and maintenance. Subsequent pages reference this footer, promoting uniformity in appearance and functionality throughout our website's design.

- **CSS Styling:**

The CSS styling across the website maintains consistency, employing a harmonious blend of colors, fonts, and layout adjustments to ensure visual coherence. Responsive design techniques are implemented to guarantee optimal display across diverse screen sizes and devices, enhancing accessibility for users. Background images are strategically utilized to augment the visual appeal of various sections, fostering a cohesive theme throughout the website. Complementing these stylistic elements. We discussed the functionality of these **JavaScript** functions in detail on the previous page.

- **Privacy & policy page (Views/Home/privacy.html)**

Privacy and Policy

Learn more about our commitment to safeguarding your privacy and protecting your data!

### VitaLab's Commitment to Privacy and Data Protection

Welcome to VitaLab's Blood Donation Management System. We understand the importance of your privacy and are dedicated to maintaining your trust by protecting your personal information. This Privacy Policy outlines how we manage your data and the measures we take to ensure its safety. By using our system, you agree to the practices described in this policy. If you have any questions or concerns, please refer to our Contact page.

#### Information Collection

Our goal is to provide you with the best possible services tailored to your needs. To achieve this, we collect and utilize various types of information, including:


**VitaLab**

[HOME](#)
[SERVICES](#)
[ABOUT US](#)
[PRIVACY POLICY](#)
[CONTACT](#)

### Information Collection

Our goal is to provide you with the best possible services tailored to your needs. To achieve this, we collect and utilize various types of information, including:

- ✓ **Personal Information:** This includes your name, email address, phone number, date of birth, and home address. This information helps us identify you and provide personalized services such as reminders for appointments and follow-ups.
- ✓ **Donation History:** We maintain a detailed record of your blood donation history, including donation dates, types of donations, and any relevant medical information. This helps us ensure your safety and tailor our services to your specific needs.
- ✓ **Usage Information:** We track how you interact with our system, such as the pages you visit and the actions you take. This data helps us understand your preferences, optimize our platform, and provide a more personalized experience.

### How We Use Your Information

Your information is used in various ways to support our services and enhance your overall experience. These include:

- ✓ **Service Delivery:** Your information enables us to manage your donations, schedule appointments, and provide personalized services such as health-related information and reminders.
- ✓ **Communication:** We may contact you via email or phone to provide updates on your donations, share health and safety information, or inform you of upcoming events and opportunities to donate.
- ✓ **Analytics:** We analyze usage patterns and user preferences to improve our system, identify trends, and develop new features that better meet your needs.
- ✓ **Compliance:** Your data helps us comply with legal obligations, such as reporting requirements for blood donations and adhering to data protection laws.

### Data Security


**VitaLab**
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### Data Security

Protecting your data is a top priority for us. We use industry-standard security measures, including encryption, firewalls, access controls, and regular security audits, to prevent unauthorized access, alteration, or destruction of your data. Our dedicated security team continually monitors and updates our systems to safeguard your information.

### Data Sharing

We take your privacy seriously and do not sell, trade, or rent your personal information to third parties. However, we may share your data in the following circumstances:

- ✓ **With Your Consent:** We may share your information with specific parties if you explicitly consent to the sharing for a particular purpose.
- ✓ **Service Providers:** We may share your data with trusted third-party service providers who support our operations, such as cloud storage or analytics providers. These providers are contractually obligated to protect your data and adhere to strict confidentiality agreements.
- ✓ **Legal Requirements:** We may disclose your data to comply with legal obligations, such as government regulations or court orders. In such cases, we aim to limit the data shared to only what is necessary.
- ✓ **Emergency Situations:** In cases of emergency, such as a medical crisis, we may share your information with healthcare professionals to provide you with the necessary care.

### User Rights

As a user of VitaLab's Blood Donation Management System, you have certain rights regarding your personal information:

- ✓ **Access:** You have the right to request access to the personal information we hold about you. Upon verification of your identity, we will provide you with the information.
- ✓ **Rectification:** If you find inaccuracies in your data, you have the right to request corrections to ensure your information is accurate and up-to-date.
- ✓ **Erasures:** Under certain circumstances, such as when your data is no longer necessary for its original purpose, you can request the deletion of your



**VitaLab**

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- ✓ **Erasure:** Under certain circumstances, such as when your data is no longer necessary for its original purpose, you can request the deletion of your personal information.
- ✓ **Data Portability:** You have the right to request a copy of your data in a machine-readable format, which you can transfer to another service provider if desired.
- ✓ **Object:** You can object to specific types of processing, such as direct marketing, and we will stop processing your data for those purposes.
- ✓ **Complaint:** If you believe your data rights have been violated, you have the right to lodge a complaint with your local data protection authority.

**Cookies and Tracking Technologies**

Our system may use cookies and other tracking technologies to enhance your experience on our platform. These technologies help us remember your preferences, analyze your usage, and improve our services. You can manage your cookie preferences in your browser settings.

**Updates to This Policy**

We may periodically update this Privacy Policy to reflect changes in our practices, legal requirements, or emerging privacy concerns. We encourage you to review this policy periodically for any updates and to stay informed about how we protect your data.

Thank you for choosing VitaLab for your blood donation journey. We appreciate your trust and remain committed to protecting your privacy and ensuring the safety of your personal information at all times.



**VitaLab**

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Thank you for choosing VitaLab for your blood donation journey. We appreciate your trust and remain committed to protecting your privacy and ensuring the safety of your personal information at all times.

The "Privacy Policy" webpage effectively communicates VitaLab's commitment to protecting user privacy and provides clear guidance on how user data is collected, used, and safeguarded. Here you can find the code [Privacy page](#).

- **HTML Structure:**

- The HTML structure is similar to other pages on the website, with a navigation bar, main content section, and footer. We have already talked about navbar and footer in previous pages. The main content section contains information about VitaLab's privacy policy, including their commitment to privacy and data protection.

## **Privacy Policy Section:**

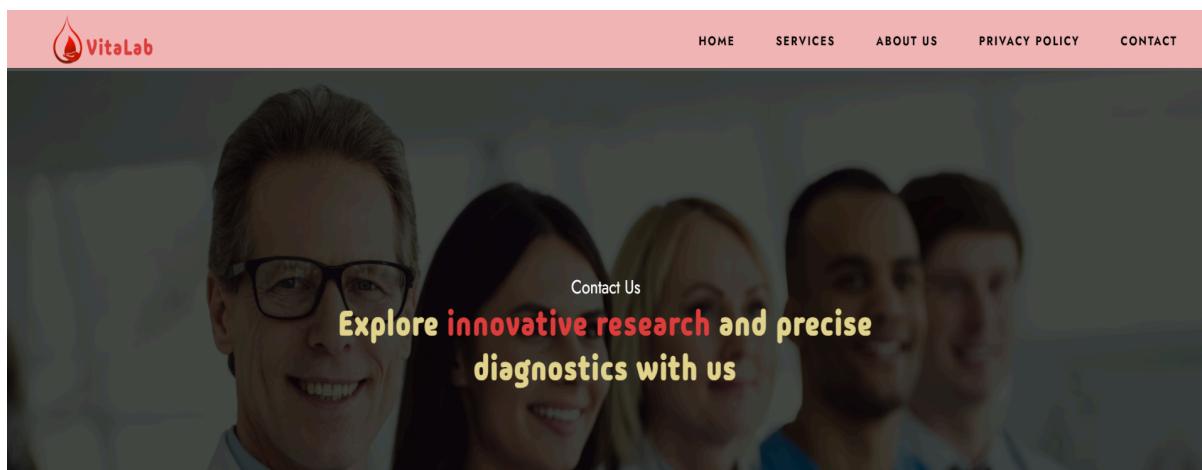
- The "Privacy Policy" section provides detailed information about VitaLab's commitment to privacy and data protection.
- It includes subsections covering various aspects such as information collection, data usage, security measures, data sharing, user rights, cookies, and updates to the policy.
- Each subsection explains VitaLab's practices and policies regarding the handling of user data in a clear and concise manner.

- **CSS Styling:**

CSS styling enhances the visual presentation of the privacy policy section, incorporating background images, font styles, colors, and spacing adjustments. Responsive design techniques guarantee an optimal viewing experience across different screen sizes, with special considerations for mobile devices. We discussed the functionality of these **JavaScript** functions in detail on the previous page.

- **Contact Us page (Views/Home/contact.html)**

The "Contact" webpage effectively provides users with information on how to get in touch with **VitaLab**, including a contact form and details about blood donation services and map showing the laboratory location (from google map). Here is the code [Contact page](#).



The screenshot shows the VitaLab contact page. At the top, there's a navigation bar with links to HOME, SERVICES, ABOUT US, PRIVACY POLICY, and CONTACT. Below the navigation is a large image of a person's face. The main content area has two columns. The left column is titled "Get in touch" and contains a contact form with fields for First Name, Last Name, Email, Password, and a message area. A red "SUBMIT" button is at the bottom. The right column is titled "Expend Blood Donate Services Here!" and features a red background with text about blood donation and a small image of hands holding red hearts.

The screenshot shows the VitaLab footer. It includes social media icons for Facebook, Twitter, Pinterest, and Instagram under "OUR SOCIALS". Below that is a navigation bar with links to HOME, SERVICES, ABOUT US, PRIVACY POLICY, and CONTACT. To the right is a sign-up form with a "SUBSCRIBE" button. At the bottom, there's a copyright notice: "© 2024 VitaLab. All rights reserved." and a map showing the location of the laboratory in Chlef, Algeria.

### • **HTML Structure:**

- The structure is similar to other pages, including a navigation bar, main content section, and footer. The main content section contains information about contacting VitaLab, including a contact form, information about blood donation services, and the laboratory location.

### **Contact Section:**

The "**Contact**" section includes a welcome message and information about contacting VitaLab. It features a contact form for users to input their details and send messages. Additionally, it includes information about phone number, email address, website URL, and a map showing the laboratory location.

- **CSS Styling:**

- CSS styles are applied to enhance the visual presentation of the contact section, including background colors, font styles, and spacing. The layout is responsive, adjusting for different screen sizes. We discussed the functionality of these **JavaScript** functions in detail on the previous page.

- **About Us page (Views/Home/about.php)**

The "**About Us**" page effectively communicates **VitaLab**'s mission, activities, and achievements while encouraging user engagement and participation in blood donation. Integration of PHP for testimonials, utilization of **Swiper.js** for testimonial display, and implementation of donation progress tracking through JavaScript contribute to a comprehensive and engaging user experience..Now let's talk about each one in details:

- **HTML Structure:**

- The structure is similar to other pages, including a navigation bar, main content section, and footer.

**1. PHP Code:** The file starts with PHP code, which includes a configuration file (`**config.php**`). This is common for **connecting** to a database .

**2. Head Section:**

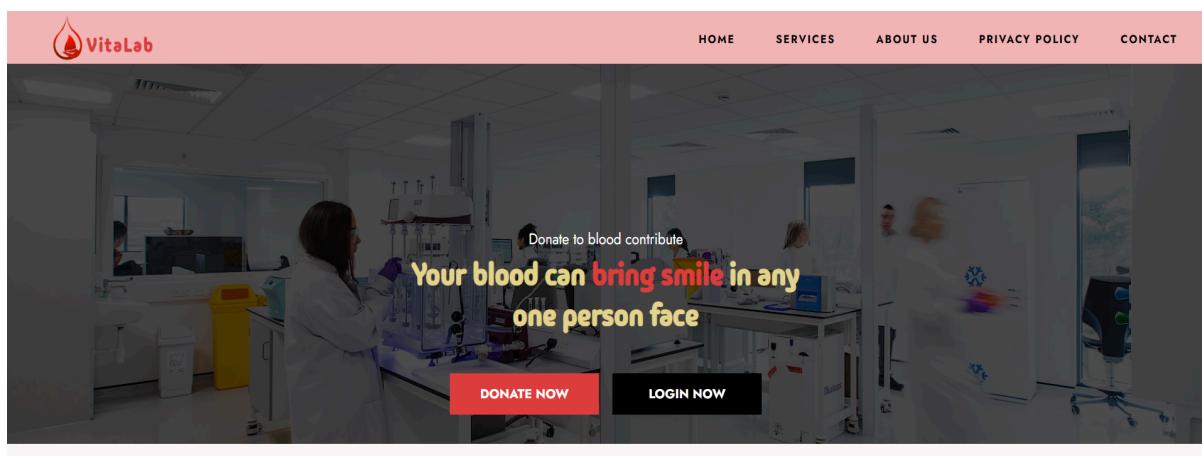
Contains metadata like charset, viewport settings, and title. It also includes links to CSS files for styling and to external libraries like Swiper for carousel functionality.

**3. Body Section:**

The main content of the web page is contained within the body tags. Here's a breakdown of the sections:

- **Navigation Bar:** Contains links to different pages of the website.

- **Welcome Section:** Encourages users to donate blood with buttons to donate or login.



- **About Us Section:** Provides information about the organization and its mission.



- [HOME](#)
- [SERVICES](#)
- [ABOUT US](#)
- [PRIVACY POLICY](#)
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## Who are we ?

**We are here not for income, but for outcome**

Which is the same as saying through shrinking from toil and pain. These cases are perfectly simple and easy to distinguish. In a free hour, when untrammelled and when nothing prevents

[EXPLORE MORE](#)



**- Get Involved Section:** Encourages users to become blood donors with information about the process and its benefits.



- [HOME](#)
- [SERVICES](#)
- [ABOUT US](#)
- [PRIVACY POLICY](#)
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## Get Involved



**Become a Donor**

Join our community of lifesavers by becoming a blood donor. Your simple act of donating blood can make a significant impact on someone's life. Learn more about the donation process and how you can contribute.

[LEARN MORE](#)



**Why Give Blood?**

Discover the compelling reasons behind blood donation. From saving lives to contributing to community health, learn about the numerous benefits and positive impacts that come with the selfless act of giving blood.

[LEARN MORE](#)



**How Donation Helps**

Explore the far-reaching effects of your blood donation. Understand the vital role it plays in medical treatments, emergencies, and maintaining a stable blood supply. Learn more about the incredible ways your donation makes a difference.

[LEARN MORE](#)

**- Our Achievements Section:** Displays statistics or achievements of the organization.





**25**  
YEAR EXPERIENCE



**3225**  
HAPPY DONORS

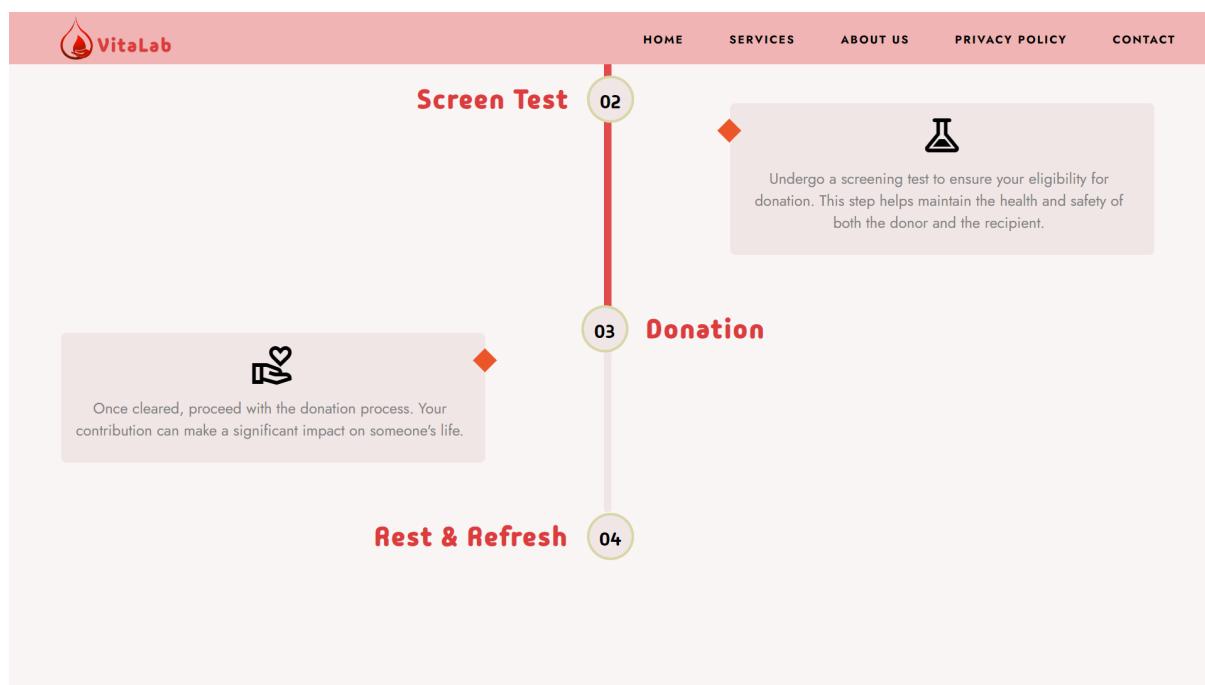
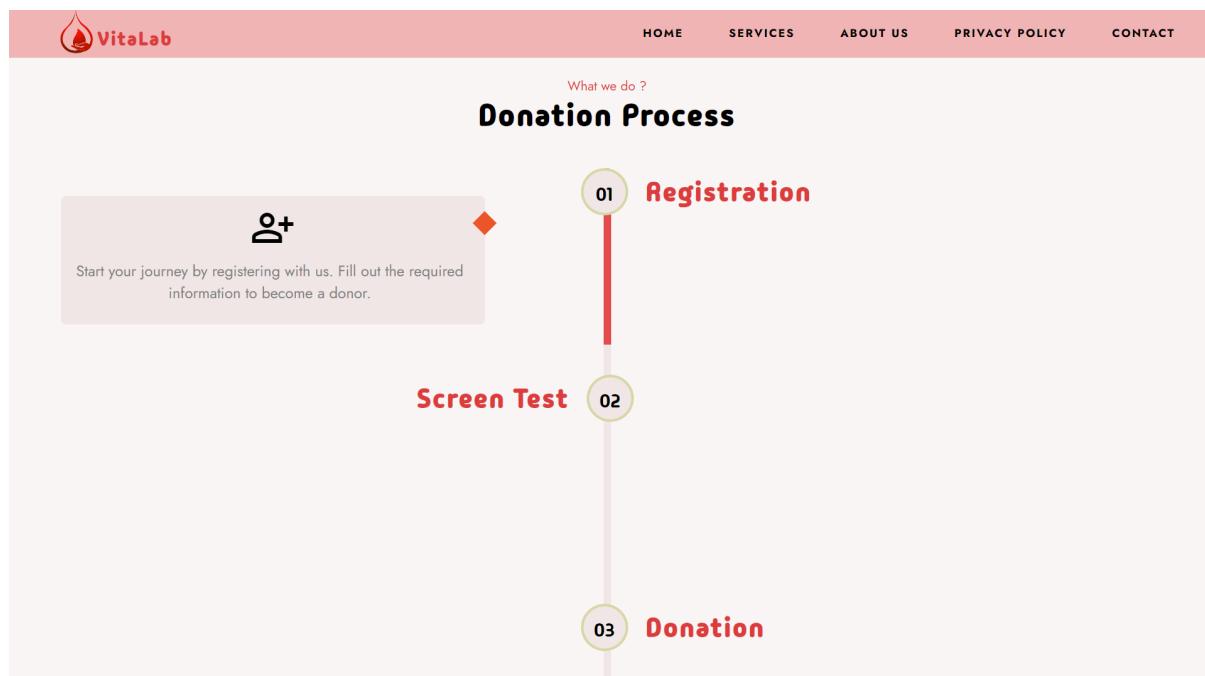


**90**  
TOTAL AWARDS



**3168**  
HAPPY RECIPIENT

**- Donation Process Section:**



### 1. Html code:

- The Donation Process section contains a container with the .Donates class. It includes headings, paragraphs, and a timeline-like structure for displaying donation process steps.

### 2. CSS Styling:

- CSS styles are applied to the donation process section to define its layout and appearance. Elements like headings, paragraphs, and the donation timeline are styled for visual consistency.
- Donation process items are positioned using CSS to create a step-by-step progression.

### 3. JavaScript Functionality:

- The JavaScript code adds interactive behavior to the donation timeline.
- It listens for scroll and resize events to update the timeline's progress bar and highlight active donation process steps.
- As the user scrolls, the JavaScript code calculates the position of each donation process step relative to the viewport and updates the progress bar accordingly.

### 4. Responsive Design:

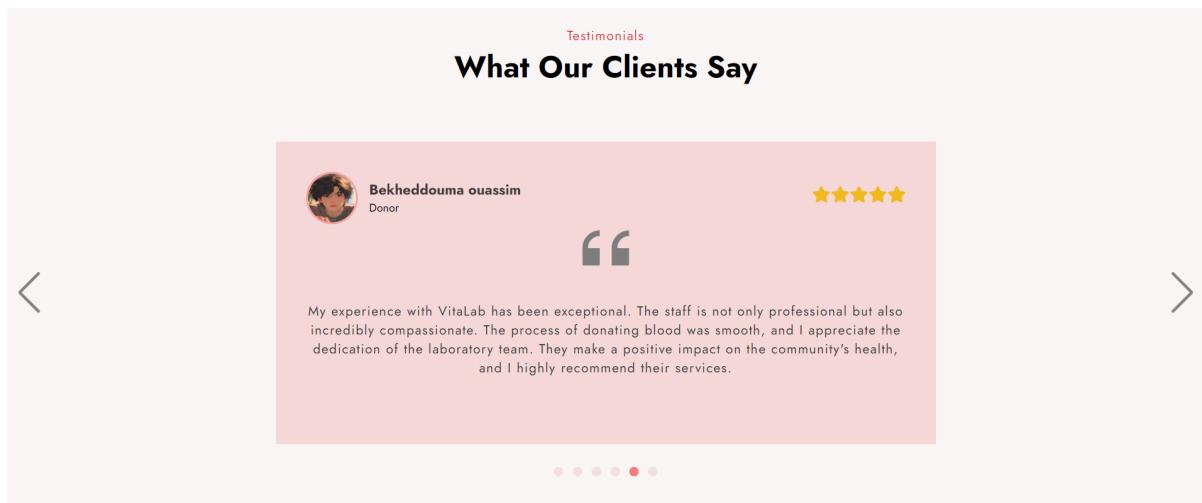
- The Donation Process section is designed to be responsive.
- Media queries adjust the layout and styling of the donation process for smaller screens, ensuring readability and usability on various devices.

- **Call for Donation Section:** Provides contact information for users to start the donation process.



### - Testimonials Section:

This part of the code fetches testimonials dynamically from a database using **PHP**. It retrieves the testimonials, loops through them, and displays each testimonial in a formatted manner.



### 1. Swiper Initialization (JavaScript):

- The Testimonials section uses **Swiper**, a JavaScript library for creating sliders and carousels.
- It initializes Swiper with the .swiper-container class, creating a looped carousel with pagination and navigation buttons.

### 2. HTML Structure:

- The testimonials are structured within a container with the .swiper-container class.
- Each testimonial is represented by a .swiper-slide within the container.

### 3. CSS Styling:

- CSS is used to style the layout and appearance of the testimonials section.
- Testimonial cards are styled to have a specific width, height, padding, and background color.
- Swiper navigation buttons and pagination dots are styled for visual appeal.

### 4. PHP Side:

- PHP code fetches testimonial data from a database dynamically.
- SQL queries are used to retrieve testimonials from the database table.
- Testimonial data (e.g., comment, rating, profile picture, name) is fetched and stored in PHP variables.
- These variables are then used to dynamically generate HTML content for each testimonial.
- The generated HTML content is echoed or outputted within the PHP script.

### 5. Responsive Design:

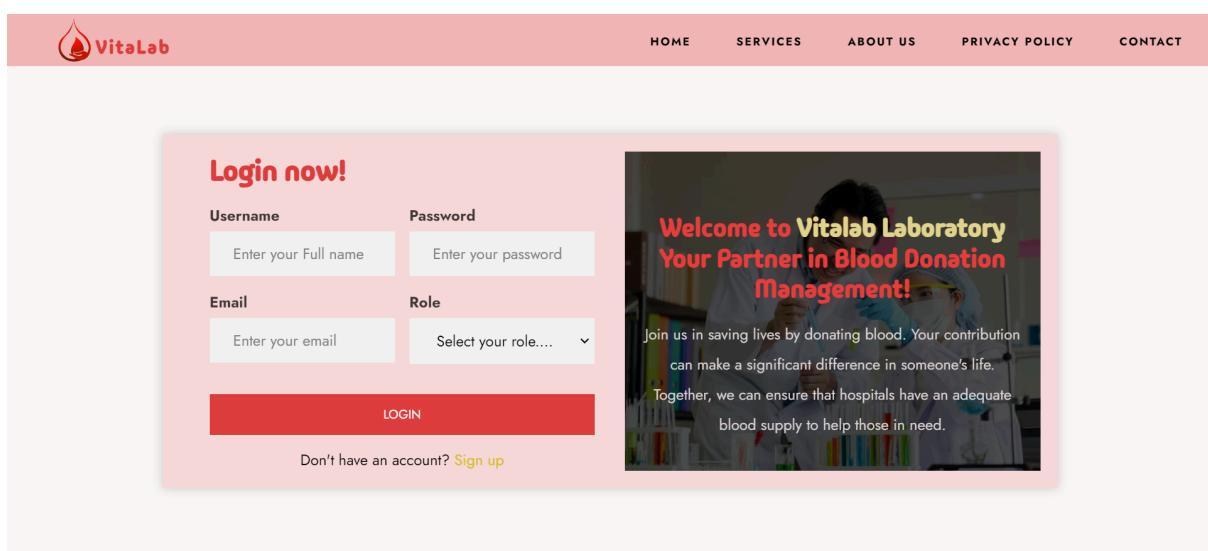
- Media queries are used to adjust the layout and styling of testimonials for smaller screen sizes (max-width: 600px).
- Testimonial cards and Swiper elements are modified to adapt to smaller screens, ensuring a seamless user experience across devices.

**- Footer:** It is similar to the previous Footer, it contains navigation links, social media links, and a subscription form.

The **PHP** side retrieves testimonial data from the database and generates HTML content dynamically, while the **JavaScript** side may enhance the presentation or add interactivity to the testimonials section on the client side.

## • Login page (**Views/Auth/login.php**)

This page comes from both of the **home** and **About us** pages, This page comprises several components, including **HTML** structure, form elements, css for the styling, client-side and **server-side** validation, **database** interaction, and **error** handling mechanisms.



### - Detailed Analysis

## **1. Session Initialization and Error Handling**

- The PHP session is initialized using `session\_start()` to manage user sessions across multiple page requests.
- Errors, if any, are retrieved from the **URL parameters** (`err`) and decoded from **JSON** format. The session errors are then **unset** to clear any previous errors.

## **2. HTML Structure**

In the HTML structure, the main section hosts the login form. It includes input fields for username, password, email, and role, with labels for each. Client-side validation offers immediate feedback, and buttons for form submission and registration redirection are provided. Client-side **validation** is implemented to highlight input fields with errors and display error messages if any. This section focuses on facilitating user **authentication** and input **validation** within the login process.

## **3. Client-Side Form Validation**

- Client-side validation is performed using PHP to check for errors in form fields.
- Error messages are displayed below the respective input fields if validation fails.

## **4. Server-Side Form Validation**

- Upon form submission using the **POST** method, the PHP script begins validation to maintain data integrity and security.
- PHP code meticulously examines each form field for correctness. It checks for:
  - Empty fields to ensure all required information is provided.
  - Valid email format to verify the authenticity of the provided email address.
  - Password length to enforce minimum security requirements.
- If any validation checks fail, errors are meticulously recorded and stored in the session. This ensures that detailed error information is available for the user.
- Following error handling, the user is promptly redirected back to the login page.

## **5. Database Interaction**

- The code includes a configuration file (`config.php`) for establishing a connection to the database.
- User authentication is performed by querying the database to verify the provided username, password, and role.

## **6. Redirects and Error Handling**

- If errors occur during form validation or authentication, they are stored in the session.
- Users are redirected back to the login page with error details if validation fails or authentication is unsuccessful.

## **7. CSS Styling:**

- The CSS styling enhances the visual appearance and layout of the login page.
- Various CSS properties are utilized to achieve responsive design, consistent spacing, and visual coherence.

## **Functionality Within the Website:**

1. Users input their login credentials (username/email and password) via the **HTML form**.
2. Client-side validation, implemented using PHP, checks for errors in the form fields. Error messages are displayed below each respective input field if validation fails.
3. Upon submission of the login form via the `POST` method, server-side validation is initiated to ensure data integrity and security.
4. PHP code validates each form field for correctness, including checks for empty fields, valid email format (if applicable), and password length.
5. If any validation checks fail, errors are stored in the session. The user is then redirected back to the login page, where error details are displayed to facilitate correction of the submitted information.

**Login now!**

Username	Password
Enter your Full name	Enter your password

Username is required. Password is required.

Email	Role
Enter your email	Select your role....

Email is required. Role is required.

**LOGIN**

Don't have an account? [Sign up](#)

6. User passwords, stored securely as hashed values in the database, are retrieved and compared against the entered password using the `password\_verify()` function.
7. If the entered password matches the hashed password stored in the database, the user is authenticated, and a session is initiated to maintain their logged-in state.
8. Depending on the user's role (e.g., donor or lab employee), they are redirected to their respective dashboard or landing page.
9. Redirects and error handling mechanisms ensure a smooth user experience. If errors occur during form validation or authentication, users are redirected back to the login page with detailed error messages to aid in resolving issues.

- **Register page (Views/Auth/register.php)**

Similar to the login page, the register page comprises several components, including HTML structure, form elements, css for the styling , client-side and server-side validation, database interaction, and error handling mechanisms.



**Welcome to Vitalab Laboratory**  
**Your Partner in Blood Donation Management!**

Whether you are a first-time donor or a regular participant, your generosity and commitment to helping others are greatly appreciated. Join us in our efforts to make a lasting difference in our community and beyond.

**Register now!**

Username	Profile Picture
Enter your Full name	Enter your profile ima
Email	Password
Enter your email	Enter your password
Address	Role
Enter your address	Select your role....
Blood Group	Phone
Select your blood :	Enter your phone num

**REGISTER**

Already have an account? [Log in](#)

### Detailed Analysis(Registration process):

1. Users submit their registration details through the **HTML form**, including their username, email, password, address, role, blood group, and phone number.
2. Client-side validation, implemented using **PHP**, checks for **errors** in form fields. Error messages are displayed below each respective input field if validation fails.
3. Upon submission of the form via the **`POST`** method, server-side validation is initiated to ensure data integrity and security.
4. PHP code performs comprehensive validation of each form field, including checks for empty fields, valid email format, password length, valid address format, valid blood group, and a valid phone number.



**Welcome to Vitalab Laboratory**  
**Your Partner in Blood Donation Management!**

Whether you are a first-time donor or a regular participant, your generosity and commitment to helping others are greatly appreciated. Join us in our efforts to make a lasting difference in our community and beyond.

**Register now!**

Username	Profile Picture
Enter your Full name	Enter your profile ima
Username is required.	
Email	Password
Enter your email	Enter your password
Email is required. Password is required.	
Address	Role
Enter your address	Select your role....
Address is required. Role is required.	
Blood Group	Phone
Select your blood :	Enter your phone num
Blood group is required. Phone is required.	

**REGISTER**

Already have an account? [Log in](#)

5. If any validation checks fail, **errors** are stored in the **session**. The user is then redirected back to the registration page, where error details are displayed to facilitate correction of the submitted information.
6. User passwords are hashed using the `password\_hash()` function before being stored in the database. This cryptographic hashing ensures that passwords are securely stored in a non-reversible format, enhancing security by protecting user passwords from unauthorized access.
7. Database interaction involves establishing a connection to the database and performing operations such as checking if the username already exists to prevent duplicates. User information, including the hashed password, is then inserted into the appropriate table (`donors` or `labEmployee`) based on the selected role.
8. Redirects and error handling mechanisms ensure a seamless user experience. If errors occur during form validation or database interaction, users are redirected back to the registration page with detailed error messages to aid in resolving issues.

- **Donor page (Views/Donor page/donor.php)**

If the user is donor type then after login or register he will redirect to this page.

The donor page serves as a comprehensive platform for donors to view their donation history, health progress, and interact with the community through comments and ratings. This report will delve into the functionality, structure, and potential enhancements of the page.

**Welcome donor!**  
**Discover cutting-edge diagnostics through donor-driven research!**

## Latest Donations



**Comments**

No comments for this donation.

### 1. Functionality of the page

- **Donation Display:** The page dynamically **fetches** and displays the latest three donations that can be registered by the donor. Each donation entry includes details such as the donation date, location, title, description, and associated comments and ratings.

**Comments**

- Thabat Malak** ★★★★★  
They took good care of us, from start to finish.
- Boutheldja Maroua** ★★★★  
I really like the quality of the services.
- Laidaoui Adel** ★★★★★  
An amzing work, keep going

**DONATE NOW**

- **Register for donation:** from the donations displayed donors can register for donations , this by clicking on the Donate button on the donation post , it redirect them into the DonatePage.
- **Comment and Rating System:** Donors can interact with donations by adding comments and ratings. The system validates user input and ensures that comments and ratings are associated only with donations made by the logged-in user.

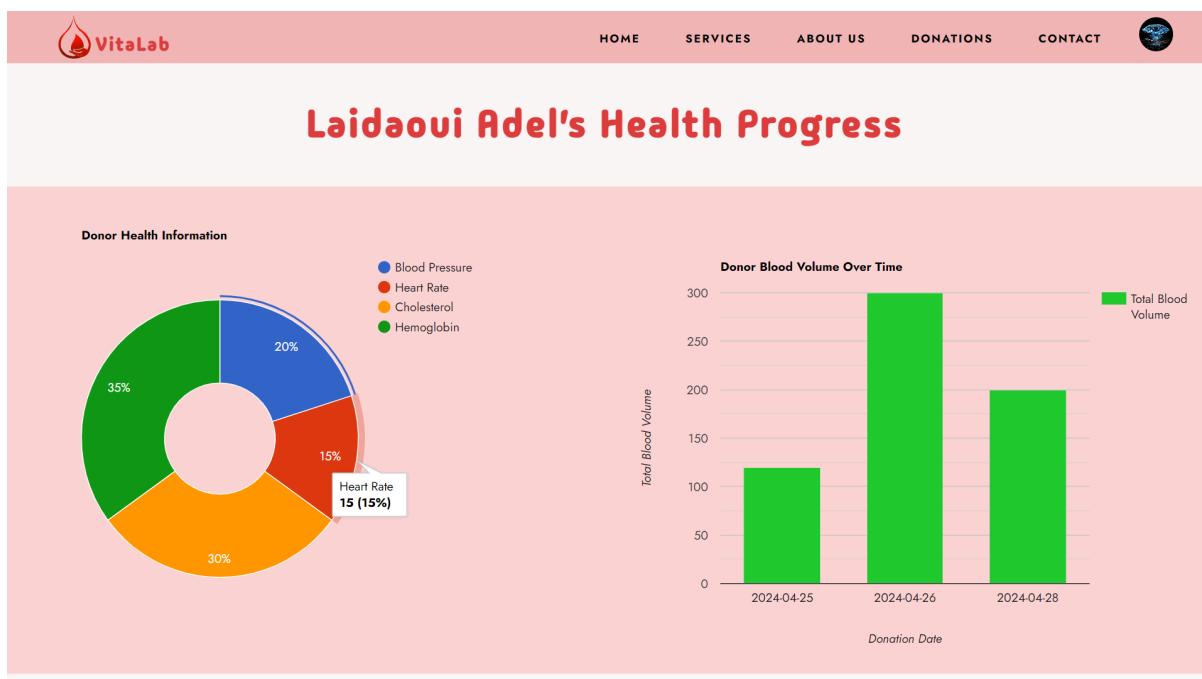
**Comments**

- Omar Hafsa** ★★  
Quality control measures are rigorously upheld, instilling trust in the reliability of the lab's results.
- Laidaoui Adel** ★★★★  
Nice experience with the laboratory!!
- Laidaoui Adel** ★★★★  
I love messi

**DONATE NOW**

- **Health Progress Visualization:** The page features two interactive charts generated using **Google Charts API**. One chart displays the donor's health information, including blood pressure, heart rate, cholesterol, and hemoglobin levels (it isn't fetched from the database it is only for the ui). The other chart illustrates the donor's blood volume over time, this information is

retrieved from the `donation_records` table from the database.



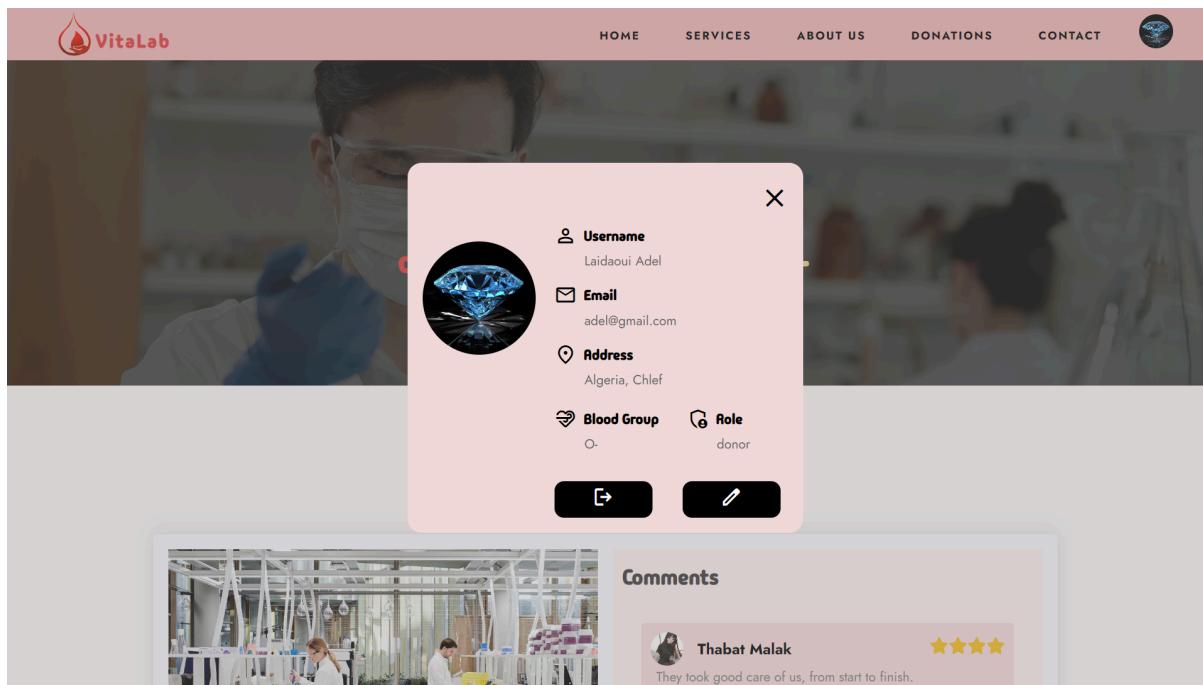
- **Donation History:** A table presents the donor's complete donation history, showcasing details such as the donation name, date, location, blood volume, and blood type.

The screenshot shows a "Donation History" table on the VitaLab website. The table has columns for Name of Donation, Date, Location, Blood Volume, and Blood Group. Three rows of data are listed:

Name of Donation	Date	Location	Blood Volume	Blood Group
Community Blood Donation Event	2024-04-25	Community Center	120	B+
Student Blood Drive	2024-04-26	University Campus	300	AB-
Blood Donation Event	2024-04-28	Local Church	200	A-

At the bottom of the page, there is a footer section with social media icons, a newsletter sign-up form, and copyright information.

- **User Profile Information:** The Donors account section provides detailed information about the donor's profile, including their username, email, address, blood group, and role. Donors can also update their profile information or log out from their account using the provided buttons.



## 2. Structure

- PHP Scripts:** The functionality is implemented using several PHP scripts: `add-comment.php`, `fetch\_user.php`, `display\_donations.php`, and `config.php`. These scripts handle various aspects such as comment addition, data retrieval, display logic, and database connection.
- HTML/CSS:** The page structure is defined using HTML, with styling provided by CSS. The layout is responsive, ensuring optimal viewing across different devices.
- JavaScript:** Google Charts API is utilized to generate interactive charts for health progress visualization.

## 3. Database Interactions

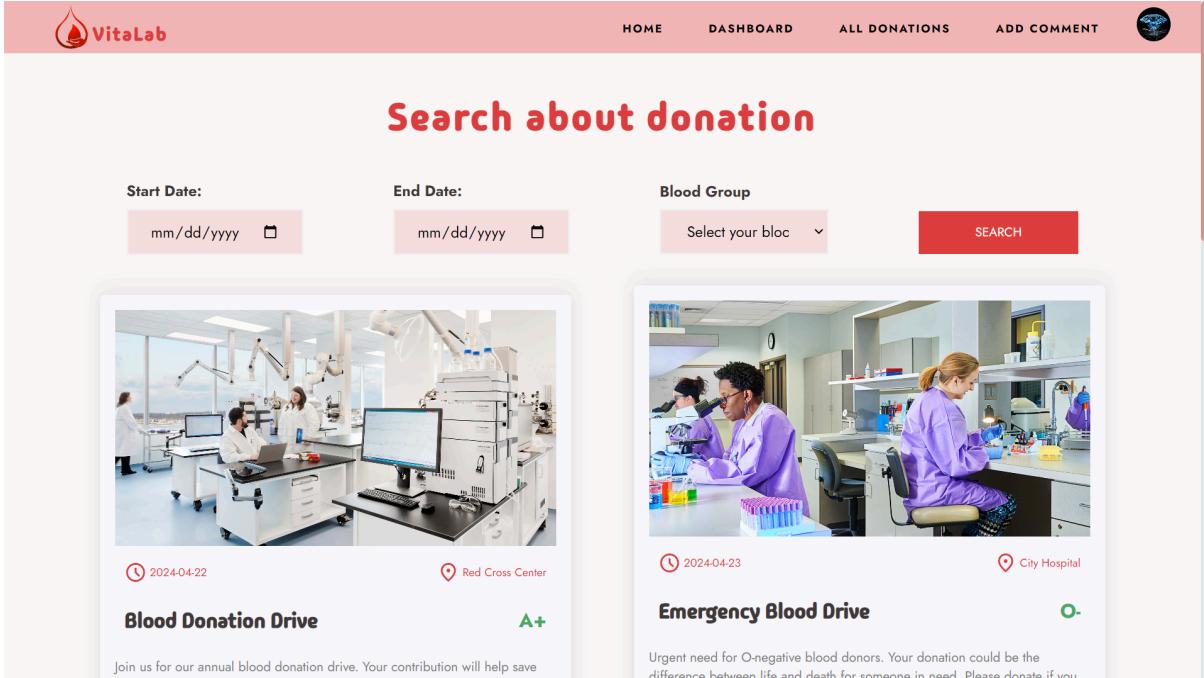
- Donations and Comments:** Data regarding donations and associated comments are stored in the database. Donation details include the donation date, location, title, description, blood volume, and blood type. Comments consist of the commenter's name, comment content, rating, and associated donation ID.
- Database Connection:** A MySQL database is used to store and retrieve donor and donation information. Database interactions are facilitated through PHP scripts using the mysqli extension for secure and efficient communication.

- Display donations page (Views/Donor page/display\_donations.php)**

The donations page serves as a platform for donors to search and view donation records based on specific criteria, such as date range and blood group. Donors can navigate to this page from the donor page. Upon arrival, donors are presented with options to input two dates and select a blood group for their search. This report aims to outline the functionality, structure, and possible enhancements of the display donations page.

## 1. Functionality

**- Search Functionality:** Users can search for donations within a specified date range and filter by blood group. The page validates user input to ensure accurate search parameters.

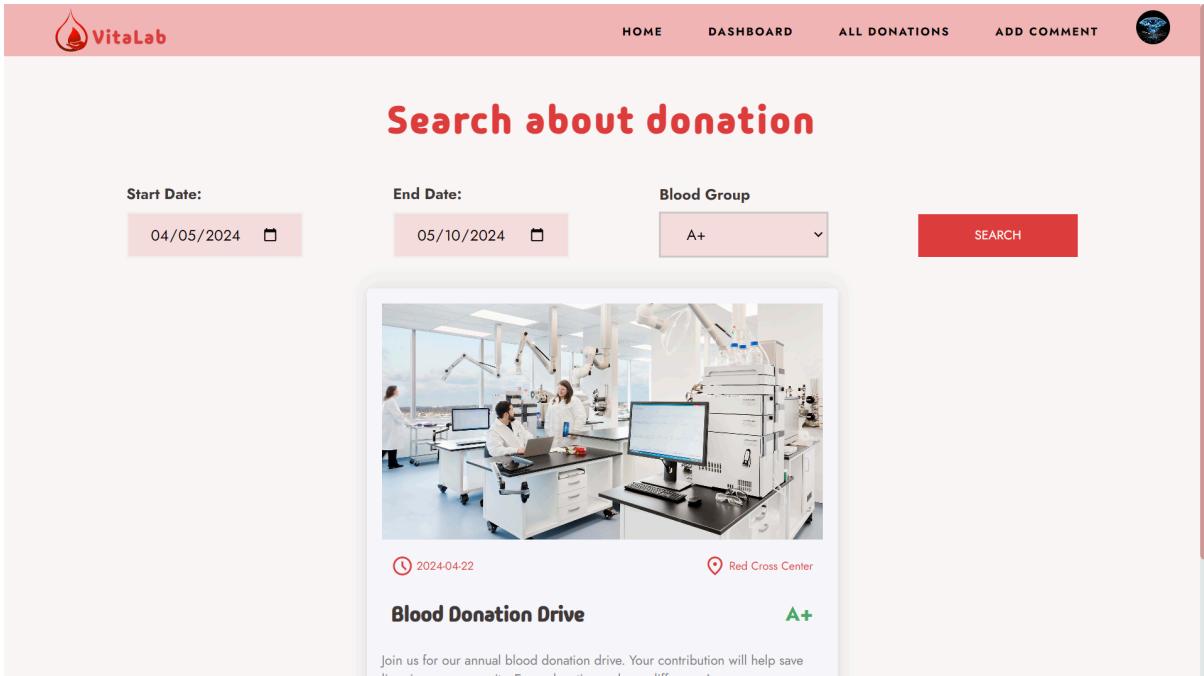


The screenshot shows the VitaLab search interface with the title "Search about donation". It features three search filters: "Start Date" (04/04/2024), "End Date" (04/10/2024), and "Blood Group" (A+). A red "SEARCH" button is positioned to the right of the filters. Below the filters, two donation records are displayed in cards:

- Blood Donation Drive** (A+) - Red Cross Center: A photograph of a laboratory with two researchers. Below the photo: "2024-04-22" and "Red Cross Center".
- Emergency Blood Drive** (O-) - City Hospital: A photograph of researchers in a lab. Below the photo: "2024-04-23" and "City Hospital".

Each card includes a brief description and a "Join us for our annual blood donation drive. Your contribution will help save lives in our community. Every donation makes a difference!" message at the bottom.

**- Display of Donation Records:** Donation records are retrieved from the database and displayed dynamically on the page. Each donation entry includes details such as the donation date, location, title, description, and an option to donate.



The screenshot shows the VitaLab search interface with the title "Search about donation". It features three search filters: "Start Date" (04/05/2024), "End Date" (05/10/2024), and "Blood Group" (A+). A red "SEARCH" button is positioned to the right of the filters. Below the filters, one donation record is displayed in a card:

- Blood Donation Drive** (A+) - Red Cross Center: A photograph of a laboratory with two researchers. Below the photo: "2024-04-22" and "Red Cross Center".

The card includes a brief description and a "Join us for our annual blood donation drive. Your contribution will help save lives in our community. Every donation makes a difference!" message at the bottom.

Start Date: 04/13/2024

End Date: 05/10/2024

Blood Group: B-

No donation found.

**- Error Handling:** The page effectively handles errors by displaying informative messages to users in case of input validation errors or database connection issues. Error messages are prominently displayed to guide users on corrective actions.

Start Date: mm/dd/yyyy

End Date: mm/dd/yyyy

Blood Group: Select your bloo

Start Donation date is required.

End Donation date is required.

Blood group is required.

**Blood Donation Drive**

**Emergency Blood Drive**

2024-04-22

Red Cross Center

O-

Urgent need for O-negative blood donors. Your donation could be the

## 2. Structure

- HTML Structure:** The page's structure is defined using HTML, with semantic elements used to organize content logically. Form elements are used for search parameters, and donation records are displayed within article elements.
- CSS Styling:** CSS is utilized for styling and layout, ensuring a visually appealing and user-friendly interface. Consistent branding and responsive design principles are applied to optimize the page's appearance across different devices.
- PHP Scripts:** Backend functionality is implemented using PHP scripts, which handle database interactions, user authentication, and error handling. Scripts such as `display\_donations.php` and `add\_comment.php` facilitate data retrieval and comment submission, respectively.

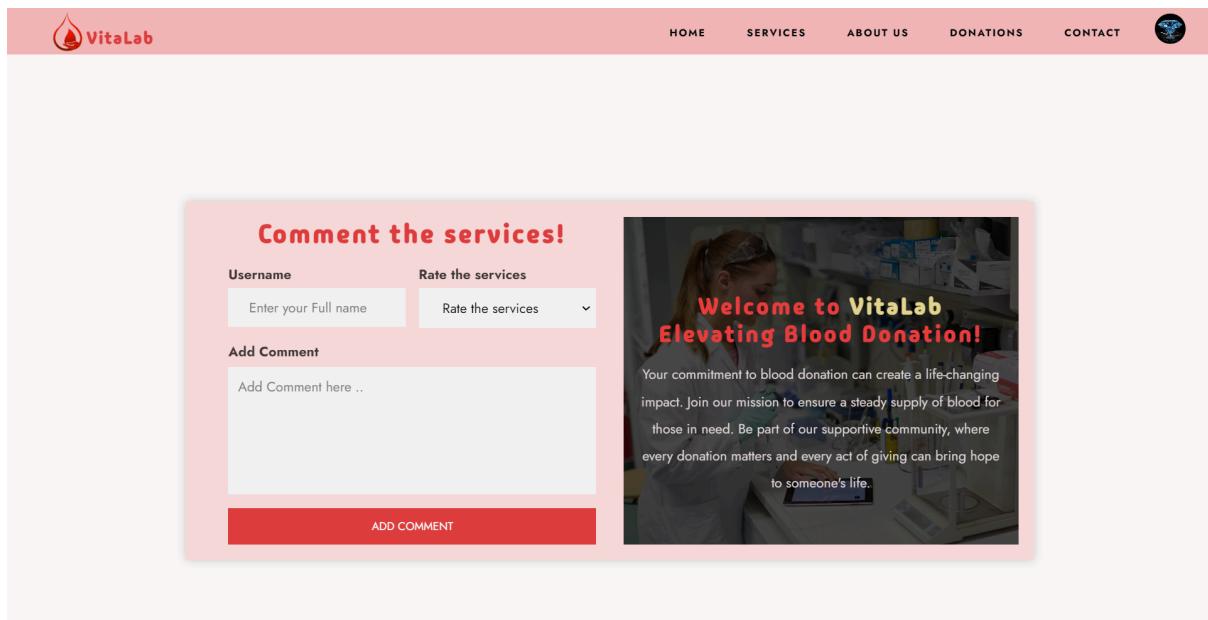
## 3. Database Interactions

- Donation Data Retrieval:** Donation records are fetched from the database based on the user's search criteria, such as date range and blood group. SQL queries are executed securely to prevent SQL injection attacks.

- **Database Connection:** A MySQL database is used to store and retrieve donation records. The database connection is established securely using PHP's mysqli extension, ensuring encrypted communication between the server and database.

- **add-comment page (Views/Donor page/add-comment.php)**

From the display donations page the Donors can comment and rate all the services of the laboratory (**general comment**). This page serves as a valuable tool for donors to share their experiences and opinions on **VitaLab's** services. Through robust functionality, structured design, and effective error handling, the page facilitates seamless interaction and engagement with the community. Continuous refinement and enhancements can further enhance the page's usability and contribute to fostering a vibrant feedback culture within the VitaLab community.



## 1. Functionality

- **Form Submission:** Users can submit comments by filling out a form with fields for their name, rating of services, and comment content. Upon submission, the data is processed by server-side scripts to validate input and insert the comment into the database.
- **Input Validation:** The page performs client-side and server-side validation to ensure that all required fields are filled out, and the input data is properly formatted. Error messages are displayed to guide users in correcting any invalid input.
- **Database Interaction:** The submitted comments are stored in the database, associating them with the respective donor and donation (if applicable). SQL queries are executed securely to prevent SQL injection attacks.

## 2. Structure

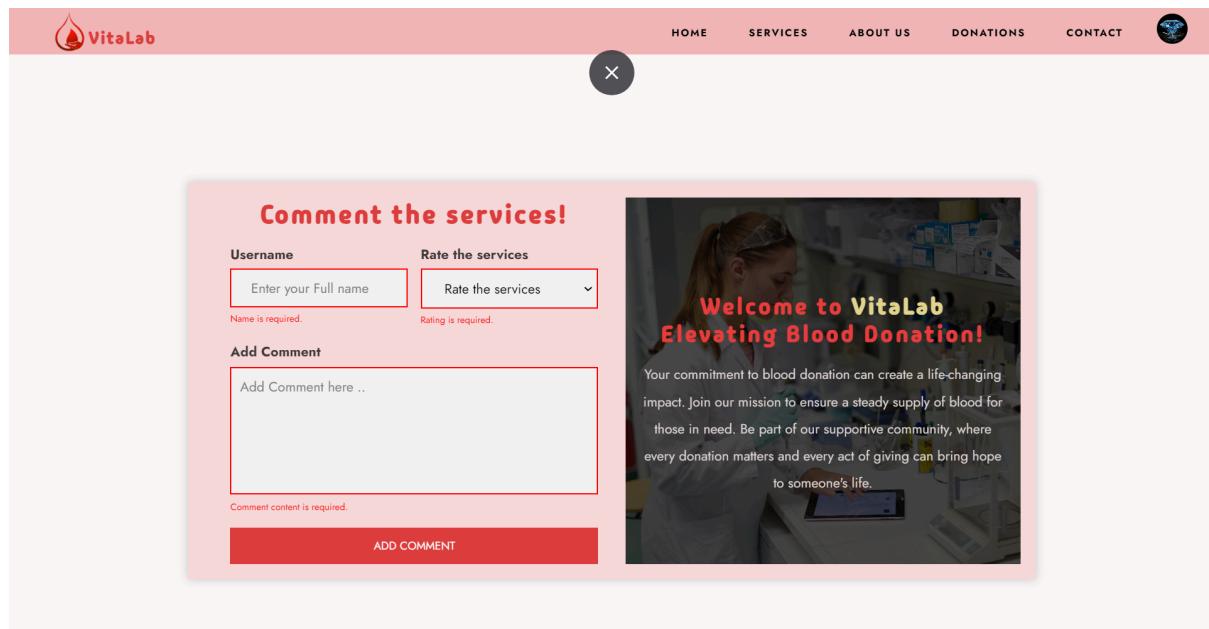
- **HTML Structure:** The page's structure is defined using HTML, with semantic elements used to organize content logically. Form elements such as input fields and buttons are included to facilitate user interaction.
- **CSS Styling:** CSS stylesheets are applied to enhance the visual presentation of the page,

ensuring consistent branding and a user-friendly interface. Styles are optimized for responsiveness across different devices.

- **PHP Scripts:** Backend functionality is implemented using PHP scripts, which handle form submission, input validation, database interactions, and error handling. Scripts such as `add-comment.php` process the form data and execute database queries.

### 3. Error Handling

- **Validation Errors:** Errors resulting from invalid user input, such as missing fields or incorrect formatting, are detected and displayed to users for correction. This ensures that only valid comments are submitted to the database.



- **Database Errors:** In case of database-related errors, such as failed insertions or connections, appropriate error messages are generated to inform users of the issue. Users are redirected to the add comment page with error details encoded in the URL parameters.

- **Register donation page (Views/Auth/donatPage.php)**

Similar to the login and register pages, the register donation page comprises several components, including HTML structure, form elements, css for the styling , client-side and server-side validation, database interaction, and error handling mechanisms.

The screenshot shows a web page for 'VitaLab' with a red header bar. The header includes the logo 'VitaLab' with a stylized blood drop icon, and navigation links for 'HOME', 'SERVICES', 'ABOUT US', 'PRIVACY POLICY', and 'CONTACT'. Below the header is a large image of a person donating blood. Overlaid on the image is a pink rectangular form titled 'Register for Donation'. The form has two columns: 'Full Name' (with placeholder 'Enter your Full name') and 'Phone' (with placeholder 'Enter your phone numb'). Below these are 'Age' (placeholder 'Enter your age') and 'Weight' (placeholder 'Enter your weight'). Underneath is a section for 'Health' (dropdown menu with placeholder 'Do you have any dis...') and 'Blood Volume (in ml)' (placeholder 'Enter your blood volu'). At the bottom are two buttons: a red 'DONATE' button and a grey 'CANCEL' button.

## 1. Functionality of the page

- **Client-Side Validation:**
  - Before the form data is submitted, client-side validation using PHP ensures that common errors are caught early. This includes checking for empty fields, validating phone numbers, and ensuring age and weight requirements are met.
  - If any client-side validation fails, error messages are displayed inline with the form fields, allowing users to correct their input immediately.
- **Server-Side Validation:**
  - Upon form submission, the server-side validation process begins to ensure data integrity and security.
  - PHP code performs extensive validation, checking each form field for correctness. This includes verifying the username, phone number, age, weight, and health status provided by the user.
  - Additional checks are made to ensure that the donation date has not expired and that the donor's blood type is compatible with the donation blood type.
  - If any validation checks fail, detailed error messages are generated and stored in an associative array called `'\$errors`'.
- **Error Handling and Display:**
  - If validation errors occur, the `'\$errors`' array is populated with error messages.
  - These error messages are stored in the session variable `\$\_SESSION['errors']` for persistence across page redirects.
  - The user is then redirected back to the donation registration page (`donatePage.php`), where the form is pre-populated with the previously entered data.
  - Error messages are displayed below each respective input field, providing clear guidance on what needs to be corrected.

- The error messages are dynamically generated based on the specific validation checks that failed, ensuring that users receive relevant feedback.

The screenshot shows a web page for 'VitaLab' with a header containing links for HOME, SERVICES, ABOUT US, PRIVACY POLICY, and CONTACT. Below the header is a large banner with a background image of a blood donation scene. The banner features the text 'Join Our Life-Saving Blood Donation Initiative!' and a descriptive paragraph about the impact of blood donation. To the right of the banner is a form titled 'Register for Donation'. The form has several input fields with validation errors:

- Full Name:** 'Enter your Full name' (error: Donor information not found)
- Phone:** 'Enter your phone numb' (error: Phone is required)
- Age:** 'Enter your age' (error: Age is required)
- Weight:** 'Enter your weight' (error: Weight is required)
- Health:** A dropdown menu with 'Do you have any dis...' (error: Health is required)
- Blood Volume (in ml):** 'Enter your blood volu' (error: blood volume is required)

At the bottom of the form are two buttons: 'DONATE' and 'CANCEL'.

- **Database Interaction:**

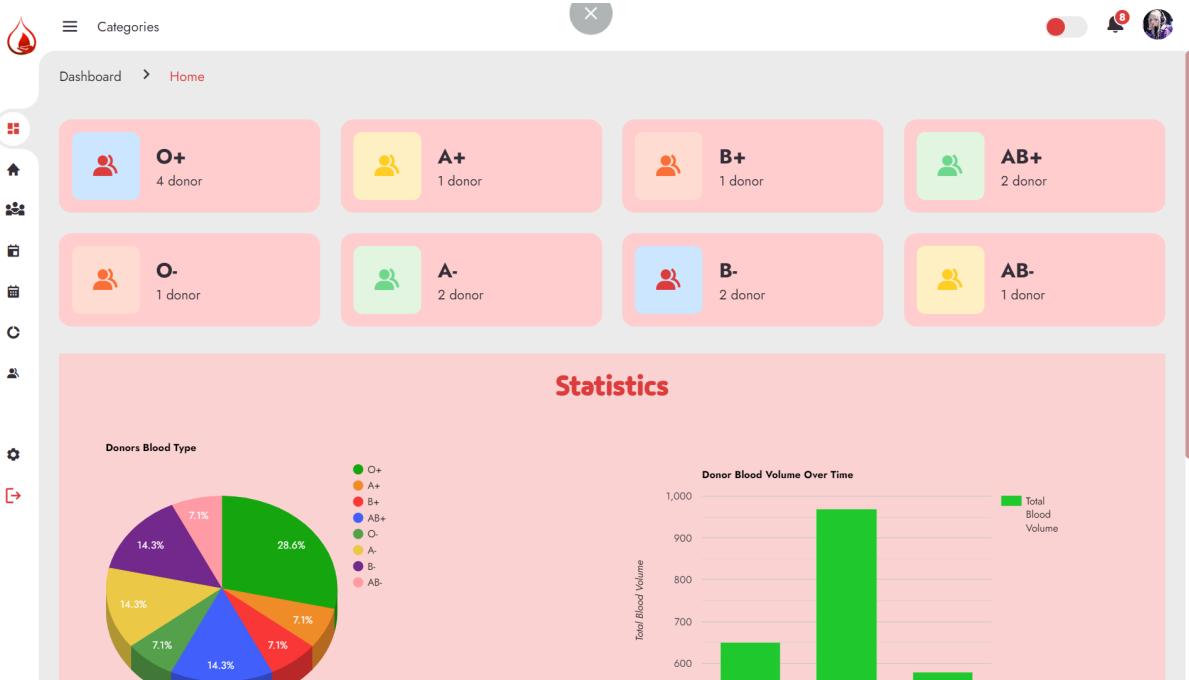
- Before inserting donor registration information into the database, further checks are performed to ensure data consistency and avoid duplicate registrations.
- If all validation checks pass and no errors occur during database interaction, the donor's registration information is successfully inserted into the `donation\_records` table.

- **Redirection and Flow Control:**

- Proper redirection is used to maintain the flow of the user journey. If errors occur, the user is redirected back to the donation registration page.
- The donation **ID** is preserved in the **URL** parameters (`id`), allowing users to resume the registration process seamlessly.
- Upon successful registration, users are redirected to their donor dashboard page (`donor.php`), where they can view their registration status and access other donor-related functionalities.

- **Admin panel page(VIEWS/Admin page/admin.php)**

The admin panel's donor management page serves as a centralized platform for administrators to oversee donor activity, manage donations, and ensure smooth operation within the blood donation system. Let's breakdown of details of this page:

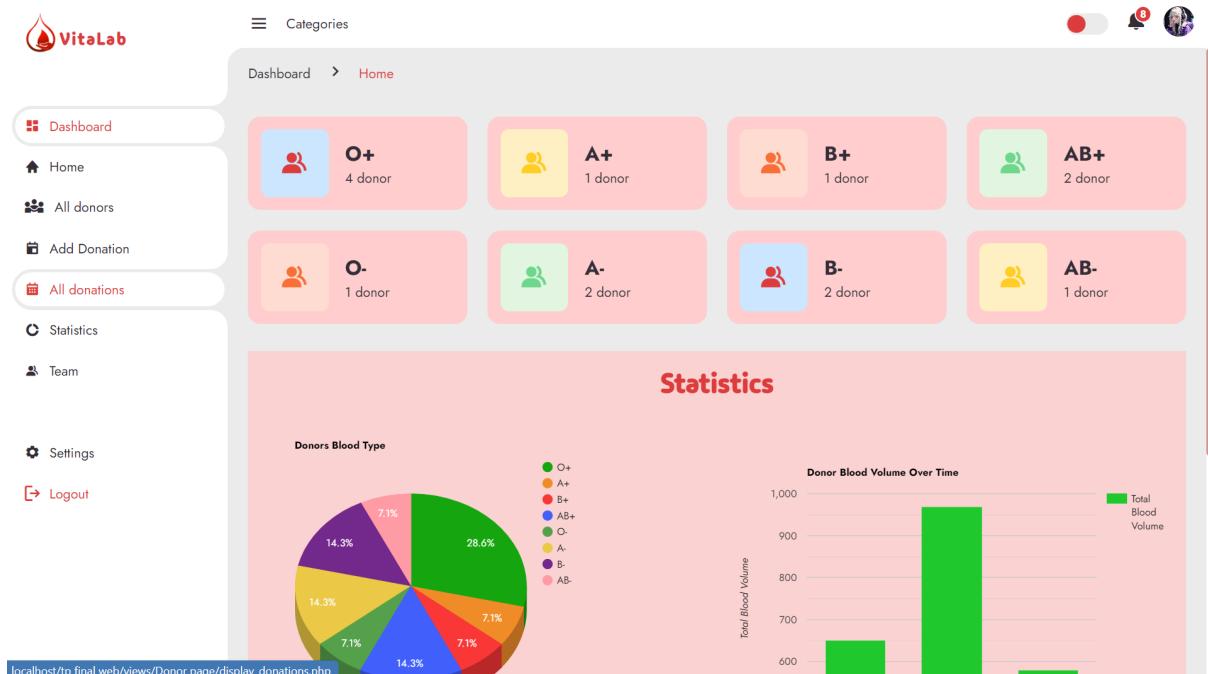


## 1. Functionality of the page

### 1.1 Donation Management:

#### 1.1.1 Display All Donations:

**Accessing All Donations:** Administrators can view all donation records by clicking on the "All Donations" option in the sidebar of the admin panel.



#### 1.2. Create Donations:(create-donation page)

- **Initiating the Process:** Administrators can create new donations on behalf of donors by clicking on the "Add Donation" button on the admin panel.
- **Redirect to Donation Registration Page:** Clicking the "Add Donation" button redirects

administrators to the donation registration page, where they input relevant information.

- **Data Input:** Administrators are prompted to enter details such as the donation date, location, blood volume, donor information, and any additional pertinent data.

Organize a Donation Campaign

Create a donation event, raise awareness, and inspire others to participate. Together, let's ensure a steady supply of blood for those in need.

**Create a Donation**

Date mm/dd/yyyy Location

Image URL Image Title

Blood Group Select your blood group

Description Add Description here ..

SUBMIT

- **Validation:** The system performs validation checks on the input data to ensure accuracy and completeness, minimizing the risk of errors or inconsistencies.
- **Database Interaction:** Upon submission, the donation record is securely stored in the database, enabling future reference and analysis.

Organize a Donation Campaign

Create a donation event, raise awareness, and inspire others to participate. Together, let's ensure a steady supply of blood for those in need.

**Create a Donation**

Date mm/dd/yyyy Location

Donation date is required. Location is required.

Image URL Image Title

Title is required.

Blood Group Select your blood group

Blood group is required.

Description Add Description here ..

Description is required.

SUBMIT

## 2. Donor Management:

### 2.1. Display All Donors:

- **Accessing Donor Information:** Administrators can manage donor information by clicking on the "All Donors" option in the sidebar of the admin panel.
- **Viewing Donor Details:** A comprehensive list of donors is displayed, showcasing details such as their name, email, address, blood type, and registration date.
- **Profile Updates:** Administrators can update donor profiles also their profiles, allowing modifications to contact details, address changes, or other relevant data.
- **Removing Donors:** In certain cases, administrators may need to remove donors from the system, which can be done directly from the admin panel, ensuring efficient management of donor records.

The screenshot shows the VitaLab Blood Donation Management System interface. On the left, there's a sidebar with navigation links: Dashboard, Home, All donors, Add Donation, All donations, Statistics, Team, Settings, and Logout. The main area is titled 'Recent Donors' and contains a table of donor information. The table has columns for Id, Donor (with small profile pictures), Date of Registration, Email, Address, Blood type, and Action (with edit and delete icons). The data in the table is as follows:

ID	Donor	Date of Registration	Email	Address	Blood type	Action
14	Boutheldja Maroua	2024-04-27 14:02:53	maroua@gmail.com	Chlef	A-	
13	Arrar Walid	2024-04-22 01:23:40	walid@gmail.com	Algeria, Boukadir	O+	
12	Hammamouche Marwa	2024-04-22 01:21:51	marwa@gmail.com	Algeria, Chlef	O+	
11	Zellal nour el houda	2024-04-22 01:20:45	houda@gmail.com	Algeria, Tnes	AB+	
10	Mesbahi imane yasmine	2024-04-22 01:18:01	yasmine@gmail.com	Algeria, Tnes	O+	
9	Thabat Malak	2024-04-22 01:17:17	malak@gmail.com	Algeria, Tnes	A-	
8	Souakri Serine	2024-04-22 01:16:32	sernie@gmail.com	Algeria, Tnes	B-	
7	Arioui Rihab	2024-04-22 01:14:57	rihab@gmail.com	Algeria, Chlef	AB+	
6	Hasbalaoui Mehdi	2024-04-22 01:13:33	mehdi@gmail.com	Algeria, Chlef	B-	
5	Bekhreddouma ouassim	2024-04-22 01:12:14	ouassim@gmail.com	Algeria, khmis meliana	O+	
4	Laidaoui Adel	2024-04-22 01:07:34	adel@gmail.com	Algeria, Chlef	O-	

### 2.2. Adding New Donors:

Lab employees can easily add new donors to the Blood Donation Management System through the "Add Donor" feature. By providing essential information such as the donor's username, email, address, blood type, and other pertinent details, administrators contribute to expanding the donor database and supporting ongoing blood donation efforts.

**Add Donor!**

Username  Enter the Full name

Email  Enter the email

Address  Enter the address

Image  Enter the profile image

Password  Enter the password

Blood Group

**SAVE** **CANCEL**

**Welcome, Lab Employee!**

Add new donors to our Blood Donation Management System to help save lives. Your efforts in recruiting donors are invaluable and can make a significant difference in ensuring an adequate blood supply for those in need.

- **Error Handling:** The system incorporates robust error handling mechanisms during the addition of new donors. In case of any input errors or validation failures, clear error messages are displayed to guide administrators in rectifying the issues.

**Add Donor!**

Username  Enter the Full name Username is required.

Email  Enter the email Email is required.

Address  Enter the address Address is required.

Image  Enter the profile image

Password  Enter the password Password is required.

Blood Group

Blood group is required.

**SAVE** **CANCEL**

**Welcome, Lab Employee!**

Add new donors to our Blood Donation Management System to help save lives. Your efforts in recruiting donors are invaluable and can make a significant difference in ensuring an adequate blood supply for those in need.

### 2.3. Updating Donor Information:

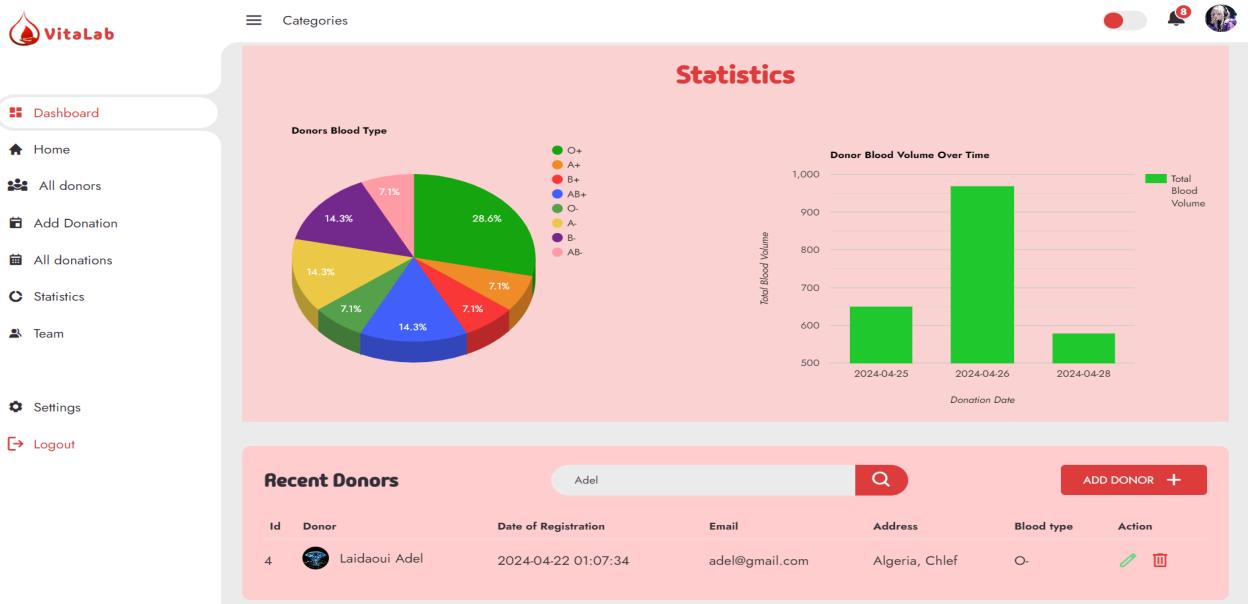
Ensuring accurate donor records is crucial for effective blood donation management. Lab employees can update donor information via the "Update Donor" feature, accessible from the admin panel. By allowing modifications to donor profiles, including name, email, address, blood type, and last donation date, administrators maintain up-to-date and reliable donor records, facilitating streamlined communication and donation tracking.

Welcome to the Blood Donation Management System!

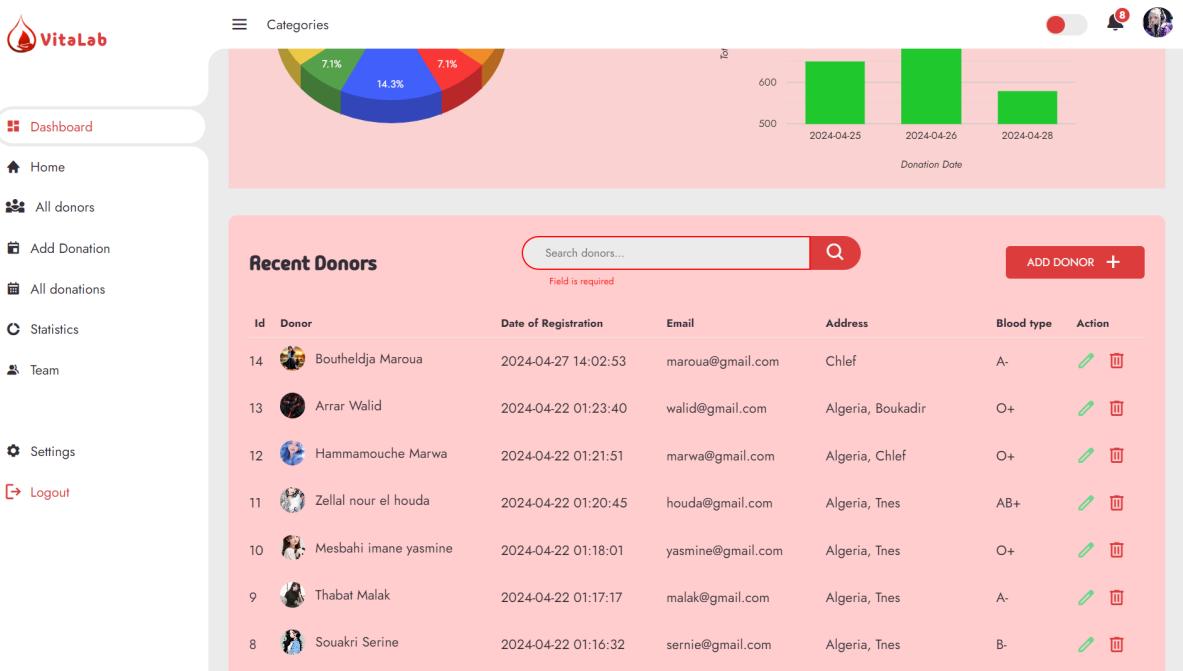
Updating your personal information, you help us maintain accurate records and provide the best possible support to our community. We appreciate your commitment to supporting those in need and encourage you to keep your information up to date. Together, we can make a lasting impact and save lives.

## 2.4. Search Donor by Name:

- **Initiating the Search:** Administrators can search for specific donors by entering their name in the search form provided on the admin panel.
- **Displaying Results:** The system filters the donor list based on the search query, displaying only those donors whose names match the entered criteria.

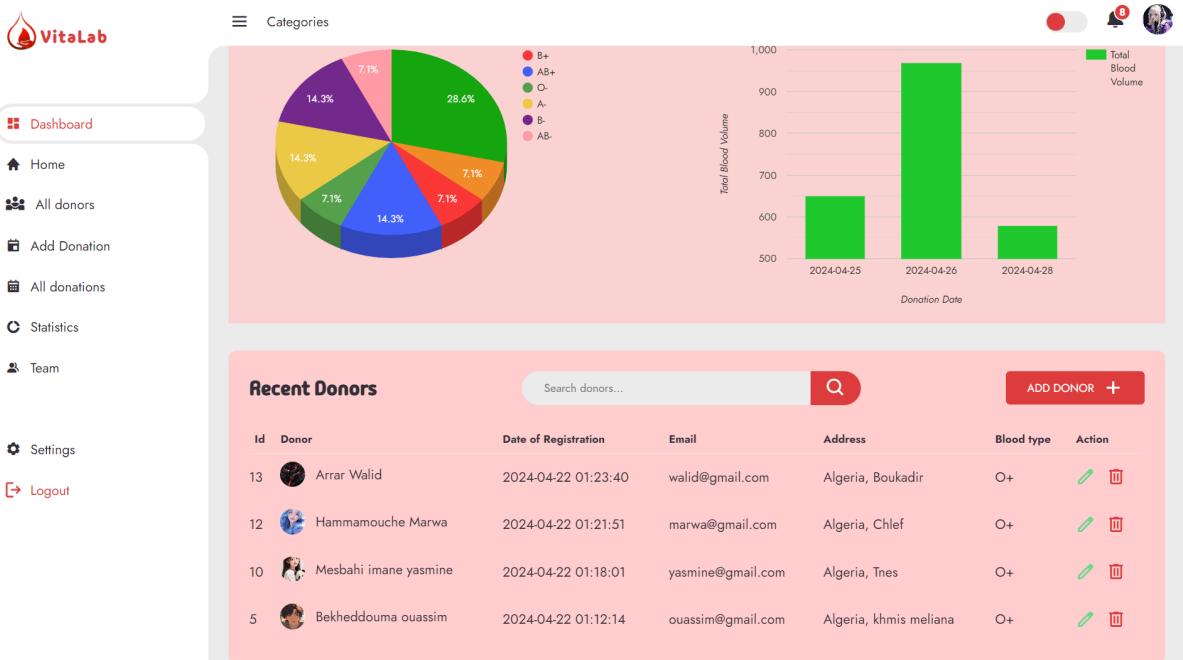


- **Error Handling:** The search functionality for donors by name is equipped with error handling capabilities. If the entered search query does not yield any results or encounters errors during execution, appropriate error messages are presented to inform administrators and guide them in refining their search criteria.



## 2.5. Display Donors by Blood Group:

- **Accessing Blood Group Information:** The admin panel displays articles representing different blood groups, each indicating the count of donors with that blood group.
- **Interactive Functionality:** Clicking on an article filters the donor list to display only those donors with the corresponding blood group.



## 2.6. Admin Profile Management:

### 1. Updating Admin Profile:

- **Accessing Profile:** Administrators can update their profile information by clicking on their profile picture or navigating to the "Settings" section.
- **Edit Profile:** Upon accessing the profile settings, administrators are presented with options

to edit their profile details such as name, email, and password.

- **Save Changes:** After making the necessary modifications, administrators can save the changes by clicking the "Save" button. The system validates the input data and ensures its integrity before updating the admin's profile.

- **Error Handling:** Robust error handling mechanisms are implemented to notify administrators of any errors encountered during the profile update process, enabling them to rectify the issues promptly.

## 2. Logout:

- **Accessing Logout:** Administrators can log out from their account by clicking on the "**Logout**" button, typically located in the profile settings or navigation menu.

- **Confirmation Prompt:** Upon clicking the "Logout" button, a confirmation prompt is displayed to ensure that the administrator intends to log out from the system.

- **Secure Logout:** Upon confirmation, the system securely logs out the administrator, terminates the current session and redirects them to the login page.

ID	Donor	Date of Registration	Email	Address	Blood type	Action	
13	Arrar V.	2024-04-22 01:13:33	mehdi@gmail.com	Algeria, Boukadir	O+		
12	Hammam S.	2024-04-22 01:12:14	ouassim@gmail.com	Algeria, Chlef	O+		
11	Zellal n.	2024-04-22 01:12:14	zellaln@gmail.com	Algeria, Tnes	AB+		
10	Mesbah H.	2024-04-22 01:12:14	mesbahh@gmail.com	Algeria, Tnes	O+		
9	Thabata M.	2024-04-22 01:12:14	thabata.m@gmail.com	Algeria, Tnes	A-		
8	Souakri S.	2024-04-22 01:12:14	souakri.s@gmail.com	Algeria, Tnes	B-		
7	Arioui A.	2024-04-22 01:12:14	arioui.a@gmail.com	Algeria, Chlef	AB+		
6	Hasbalaoui Mehdi	2024-04-22 01:13:33	mehdi@gmail.com	Algeria, Chlef	B-		
5	Bekheddouma ouassim	2024-04-22 01:12:14	ouassim@gmail.com	Algeria, khmis meliana	O+		
4	Laidui Adel	2024-04-22 01:07:34	adel@gmail.com	Algeria, Chlef	O-		

## 3. Statistics:

### 3.1. Data Visualization:

- **Insightful Charts:** The admin panel features interactive charts generated using the Google Charts API, providing insights into donation trends and donor health information.
- **Blood Type Distribution Chart:** Illustrates the distribution of blood types among donors, aiding administrators in understanding donor demographics.
- **Blood Volume Over Time Chart:** Visualizes the blood volume donated over time, enabling administrators to track donation trends and make informed decisions regarding resource allocation.

- **Interactive Features:** Both charts offer interactive features such as tooltips and zooming capabilities, enhancing usability and facilitating deeper analysis of the data presented.



## 2. Structure:

### 1. PHP Scripts:

- The functionality is implemented through PHP scripts such as `fetch\_user.php`, `search\_donor.php`, `display\_donors.php`, and `config.php`.
- These scripts handle data retrieval, display logic, database connections, and interaction with the user interface.

### 2. HTML/CSS:

- The page layout is defined using HTML markup, styled using CSS to ensure a visually appealing and user-friendly interface.
- The design is responsive, adapting seamlessly to various screen sizes and devices.

### 3. JavaScript:

- **Google Charts API** is utilized to create interactive charts for data visualization, enhancing the user experience and providing administrators with valuable insights.
- Additionally, JavaScript and CSS are used to implement dark/light mode functionality for the admin interface.
- **Dark Mode:** Admins have the option to switch between dark and light modes for improved visibility and reduced eye strain during prolonged usage. JavaScript and CSS handle the dynamic styling changes based on user preferences.

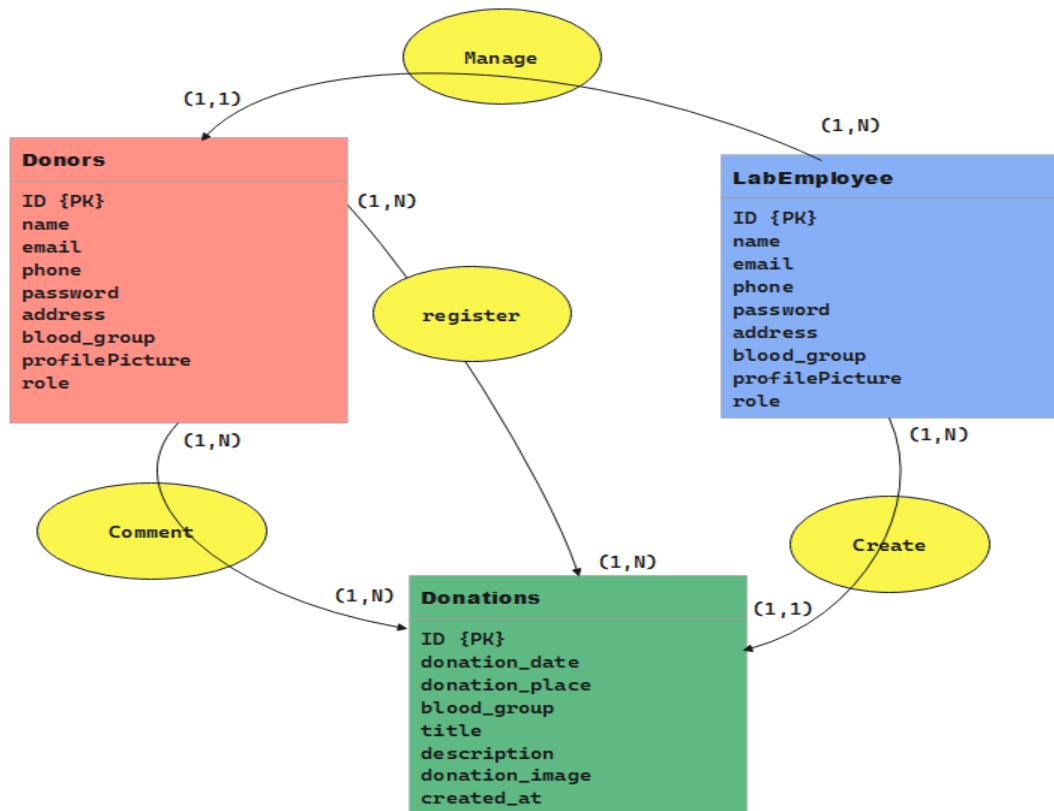


### 3. Database Interactions:

- **Donation Records:** Data pertaining to donations, including donation date, blood volume, and associated donor information, are stored in the database. These records are queried and displayed on the admin panel for review and management.
- **Donor Management:** Donor information such as name, email, address, blood type, and registration date are stored in the database. Administrators can perform CRUD (Create, Read, Update, Delete) operations on donor records to maintain an accurate and up-to-date database.
- **Database Connection:** The admin panel interacts with a MySQL database using PHP's mysqli extension, ensuring secure and efficient communication between the application and the database server.

## 4. Database Presentation

### a. Conceptual Data Model (CDM)



The conceptual data model (**CDM**) provides a high-level overview of the database structure, focusing on entities and their relationships.

#### Entities:

1. **Donors**: Represents individuals who donate blood. Each donor has attributes such as name, email, password, address, blood group, phone number, profile picture, and timestamps for creation and updates.
2. **Lab Employees**: Represents employees working in the laboratory. Similar to donors, lab employee have attributes like name, email, password, address, blood group, phone number, profile picture, and timestamps for creation and updates.
3. **Donations**: Represents blood donations made by lab Employee . Each donation includes attributes such as donation date, donation place, blood group, title, description, donation image, creator (a reference to the lab employee who logged the donation), and timestamps for creation.

## **Relationships:**

- **Donors - Donations (Register Relationship):**  
This relationship captures the registration of donations made by donors. It highlights the recording of donor contributions towards donation events.
  - One donor can make multiple donations (**1:n**).
  - One donation is made by one or many donors (**1:n**).
- **Donors - Donations (Comment Relationship):**  
This relationship signifies the interaction of donors through comments on donation events.
  - One donor can make multiple comments(**1:n**).
  - One comment is made by one or many donors (**1:n**).
- **Lab Employees - Donors (Manage Relationship):**  
This relationship reflects the management of donors by lab employees.
  - One lab employee can manage multiple donors (**1:n**).
  - One donor is managed by one lab employee (**1:1**).
- **Lab Employees - Donations (Create Donation Relationship):**  
This relationship represents the creation of donation events by lab employees.
  - One lab employee can create multiple donations (**1:n**).
  - One donation is created by one lab employee (**1:1**).

## **b. Logical Data Model (LDM)**

In the process of refining the database structure from the Conceptual Data Model (**CDM**) to the Logical Data Model (**LDM**) for this project, we meticulously transformed entities, attributes, and relationships while specifying data types, keys, and constraints. This report outlines the steps taken to ensure data integrity and accuracy in representing the connections between entities.

### **Algorithm to transform CDM to LDM**

#### **1. Identify Entities and Attributes:**

- Review the entities and their attributes outlined in the **CDM** for the project.
- Ensure all entities are identified and their attributes are comprehensive.

#### **2. Refine Attributes:**

- Specify data types, sizes, and constraints for each attribute based on the requirements of the project.
- Ensure consistency and accuracy in data representation.

#### **3. Identify Relationships:**

- Review the relationships between entities in the **CDM** for the project.
- Determine cardinality and optionality for each relationship specific to the project.

#### **4. Translate Relationships into Tables:**

- Resolve many-to-many relationships by introducing junction tables.
- Add foreign keys to maintain referential integrity between related tables.

## **5. Review and Refine:**

- Thoroughly review the transformed LDM specific to [Your Project Name] to ensure completeness, accuracy, and consistency.
- Refine as necessary to ensure alignment with the requirements of the project.

## **6. Documentation of the LDM:**

- Document the finalized LDM comprehensively for [Your Project Name], including all tables, attributes, relationships, data types, and constraints.

add image here

### **Transformation of our CDM into LDM:**

#### **1. Donors - Donations (Register Relationship):**

- Introduced a junction table named `donation\_records` to resolve the many-to-many relationship.

#### **2. Donors - Comments (Comment Relationship):**

- Added a foreign key referencing the Donors table directly in the Comments table to maintain referential integrity.

#### **3. Lab Employees - Donors (Manipulate Relationship):**

- Established a one-to-many relationship by adding a foreign key in the Donors table referencing the Lab Employees table.

#### **4. Lab Employees - Donations (Create Donation Relationship):**

- Reflected the one-to-many relationship by adding a foreign key in the Donations table indicating the lab employee responsible for creating each donation.

By following these transformation steps, we've ensured that the Logical Data Model (**LDM**) accurately reflects the relationships between entities, maintaining data integrity and facilitating effective database management for our project.

```
Donors(ID, name, email, password, phone, address,blood_group, profilePicture, role, #created_by )
```

```
LabEmployee(ID, name, email, password, phone, address,blood_group, profilePicture, role)
```

```
Donations(ID, donation_date, donation_place, blood_group, donation_image, title, description, created_at, #created_by )
```

```
Donation_records(ID, #donor_id, #donation_id , blood_group, blood_volume)
```

```
Comments(ID, #donor_id, #donation_id, comment, rating, is_general, created_at)
```

### c. Database Implementation Details

In the database implementation, we utilize **SQL** (Structured Query Language) to create tables, defining their structure, constraints, and relationships. Here's an overview of our implementation approach:

1. We employ the **CREATE TABLE** statement to establish tables for each entity, meticulously specifying attributes, data types, constraints, and foreign keys where necessary.
2. For each table, we designate a primary key using the **PRIMARY KEY** constraint, ensuring the unique identification of records within the database.
3. To maintain data integrity and enforce referential integrity constraints, **foreign keys** are employed to establish relationships between tables, referencing primary keys in related entities.
4. Check **constraints** are utilized to enforce data validation rules, guaranteeing that only valid data is stored within the database, thereby enhancing data integrity.
5. To track the creation and last update **timestamps** of records, timestamp columns (created\_at and updated\_at) are incorporated into relevant tables, facilitating data management and auditing processes.

The meticulous design and implementation of the database, in accordance with the conceptual and logical models, ensure robustness, scalability, and data integrity within our application's backend infrastructure.

Below are visual representations depicting the creation of tables and their respective structures:

#### - Database Creation

```
CREATE DATABASE laboratory;
```

Description: This image illustrates the creation of the database named "**laboratory**".

#### - Donors Table

```
USE LABORATORY;

-- Create donors table
CREATE TABLE donors (
    id INT UNSIGNED NOT NULL AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
```

```

email VARCHAR(100) NOT NULL UNIQUE,
password VARCHAR(2000) NOT NULL,
address VARCHAR(255),
blood_group VARCHAR(3) NOT NULL CHECK (blood_group REGEXP
'^[A|B|AB|O][+-]$'),
phone VARCHAR(15) CHECK (phone REGEXP '^+[+]?[0-9]{10,15}$'),
profilePicture VARCHAR(300),
role VARCHAR(20) NOT NULL DEFAULT 'donor',
created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP
);

```

**Description:** The image showcases the creation of the "**Donors**" table, including attributes, data types, constraints, and foreign key references.

#### - LabEmployee Table

```

USE laboratory;

-- Create labEmployee table
CREATE TABLE labEmployee (
    id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
    name VARCHAR(100) NOT NULL,
    email VARCHAR(100),
    password VARCHAR(2000) NOT NULL,
    address VARCHAR(255),
    blood_group VARCHAR(3) NOT NULL CHECK (blood_group REGEXP
'^[A|B|AB|O][+-]$'),
    phone VARCHAR(15) NOT NULL CHECK (phone REGEXP
'^+[+]?[0-9]{10,15}$'),
    profilePicture VARCHAR(300),
    role VARCHAR(20) NOT NULL DEFAULT 'admin',
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    updated_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE
CURRENT_TIMESTAMP
);

```

Here, the "**LabEmployee**" table is created with attributes, data types, and timestamp columns for tracking creation and updates.

#### - Donations Table

```

USE laboratory;

-- Create donations table
CREATE TABLE donations (
    id INT UNSIGNED NOT NULL AUTO_INCREMENT PRIMARY KEY,
    donation_date DATE NOT NULL,
    donation_place VARCHAR(255) NOT NULL,
    blood_group VARCHAR(3) CHECK (blood_group REGEXP
'^[A|B|AB|O][+-]?$',),
    title VARCHAR(255) NOT NULL,
    description TEXT,
    donation_image VARCHAR(2000),
    created_by INT UNSIGNED NOT NULL,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (created_by) REFERENCES labEmployee(id) ON DELETE
CASCADE
);

```

This image displays the creation of the "**Donations**" table, featuring attributes related to donation details and foreign key references.

#### - **Comments Table**

```

USE laboratory;

-- Create comments table
CREATE TABLE comments (
    id INT UNSIGNED NOT NULL AUTO_INCREMENT PRIMARY KEY,
    donor_id INT UNSIGNED NOT NULL,
    donation_id INT UNSIGNED,
    comment TEXT,
    rating TINYINT UNSIGNED CHECK (rating >= 0 AND rating <= 5),
    is_general TINYINT(1) DEFAULT 0 NOT NULL,
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (donor_id) REFERENCES donors(id) ON DELETE
CASCADE,
    FOREIGN KEY (donation_id) REFERENCES donations(id) ON DELETE
CASCADE
);

```

The "**Comments**" table creation is depicted, featuring attributes for comments, ratings, and foreign key references to donors and donations.

### - **Donation\_Records Table**

```
USE laboratory;

-- Create donation_records table
CREATE TABLE donation_records (
    id INT UNSIGNED NOT NULL AUTO_INCREMENT PRIMARY KEY,
    donor_id INT UNSIGNED NOT NULL,
    donation_id INT UNSIGNED NOT NULL,
    blood_group VARCHAR(3) NOT NULL CHECK (blood_group REGEXP
'^^(A|B|AB|O)[+-]$',),
    created_at TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    blood_volume INT(6),
    FOREIGN KEY (donor_id) REFERENCES donors(id) ON DELETE
CASCADE,
    FOREIGN KEY (donation_id) REFERENCES donations(id) ON DELETE
CASCADE
) ;
```

Lastly, the creation of the "**Donation\_Records**" table is shown, detailing attributes for recording donor donations and related foreign key references.

## 5. Conclusion

In essence, our project represents a holistic solution to the complex challenges facing blood donation management and laboratory analyses. By fostering collaboration, innovation, and efficiency, we strive to uphold the integrity of the blood supply chain, safeguarding the health and well-being of individuals within the community. Through our collective efforts, we aspire to make a tangible difference in healthcare delivery, one blood donation at a time.

## 6. GitHub Repository

The source code and documentation for the application are available on the GitHub repository. [Vitalab](#).