



SIMATS SCHOOL OF ENGINEERING
SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES
CHENNAI-602105



BLOOD BANK MANAGEMENT SYSTEM

A CAPSTONE PROJECT REPORT

Submitted in the partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

INFORMATION TECHNOLOGY

Submitted by

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Under the Supervision of

MS.L.Reetha

NOVEMBER 2024

DECLARATION

I am, **A.Gouri shankar reddy** student of **Bachelor of Engineering in** Department of Computer Science and Engineering, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, hereby declare that the work presented in this Capstone Project Work entitled **Blood Bank Management System** is the outcome of our own bonafide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics.

(A.Gouri shankar reddy 192210105)

Date: 21-10-2024

Place: Chennai

CERTIFICATE

This is to certify that the project entitled “**Blood Bank Management System**” submitted by **A.Gouri shankar reddy** has been carried out under my supervision. The project has been submitted as per the requirements in the current semester of B.E CSE.

Teacher-in-charge

MS.L.Reetha

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Abstract

The Blood Management System is a dynamic website aimed at streamlining the process of blood donation, requests, and management of blood inventory in healthcare institutions. This project emphasizes creating an efficient platform that connects donors, hospitals, and blood banks while ensuring secure and seamless operations. The system includes a user-friendly interface for registration, real-time inventory management, and a secure login system for authorized users.

Introduction

Blood donation is a critical healthcare service that saves millions of lives. However, managing blood donations and ensuring timely availability has been a challenge for many healthcare systems. The Blood Management System addresses these challenges by providing a centralized and dynamic platform to manage blood requests, donations, and stock in real-time. This system ensures that hospitals and blood banks can easily track blood availability and meet urgent demands efficiently.

Project Description

The Blood Management System is designed to provide a dynamic and responsive interface for donors, healthcare institutions, and blood banks. It allows users to register, log in, and manage their profiles. Hospitals can check the availability of specific blood groups and raise requests, while donors can keep track of their donation history and eligibility for the next donation.

About project

The project focuses on building a web application that integrates features such as user registration, secure login, real-time blood inventory, and request management. The aim is to ensure that blood donations are efficiently managed, and urgent requests are fulfilled by matching them with available blood stocks across different locations.

Problem Description

One of the primary problems in the current blood donation ecosystem is the lack of a centralized system for managing blood availability. Often, hospitals face shortages due to inefficient communication between blood banks and donors. This project solves the problem by creating a web-based system that maintains real-time blood inventory, facilitates blood requests, and manages donor information securely.

Program to build a simple Software for Blood Management System

Tool Description

- Programming Language: HTML, CSS, JavaScript, PHP.
- Database: MySQL for storing user information, blood requests, and donation history.
- Server: Apache (using XAMPP).
- Other Tools: Bootstrap for responsive design.

User Interface

The user interface includes a clean and responsive layout. The home page displays information about blood donation, and the login page allows registered users to access their account. There is a dashboard for both donors and hospitals to view blood availability and manage requests.

Features

- User Registration: Allows new users to register as donors or hospitals.
- Login: Secure access for registered users using email and password.
- Blood Inventory Management: Tracks the availability of different blood types.
- Request Management: Hospitals can request blood, and donors can view donation opportunities.
- Notifications: Alerts users when specific blood types are in demand.

Operations

The system includes various operations for both donors and hospitals:

- Donors can update their profile, view donation history, and register for new donations.
- Hospitals can view blood availability and request specific blood types when needed.

Approach / Module Description / Functionalities

The Blood Management System is designed with modularity in mind. Every operation is handled by a separate function, allowing ease of maintenance and future enhancements. Core modules include:

1. User Registration Module
2. Login Authentication Module
3. Blood Inventory Management Module
4. Request Management Module
5. Notification Module

All these functions work together to create a comprehensive software solution that efficiently manages the blood donation and request process.

Implementation

The system is implemented using front-end technologies (HTML, CSS, JavaScript) for the interface and PHP for server-side operations. The MySQL database stores all the relevant data, including user details, blood inventories, and requests. AJAX is used to fetch real-time data without refreshing the page.

Output

The final output of the project is a fully functional web application. The following screenshots demonstrate the core functionalities:

- User Registration Page: A clean form for new users to register.
- Login Page: Secure login system for donors and hospitals.

- Dashboard: Displays real-time blood inventory and donation history.
- Request Form: Hospitals can submit blood requests through an easy-to-use form.

Pseudocode:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="UTF - 8">
```

```
<meta name="viewport" content="width=device-width" initial-scale="1.0">
```

```
<title>Home page</title>
```

```
</head>
```

```
<style>
```

```
body{
```

```
margin:0px;
```

```
padding:0px;
```

```
}
```

```
.navbar{
```

```
margin:auto;
```

```
padding:0px;
```

```
display:flex;
```

```
justify-content:space-between;
```



```
}
```

```
.navbar ul{
```

```
list-style-type:none;
```

```
width:100%;
```

```
background-color:rgb(121, 118, 118);
```

```
padding:0px;
```

```
margin:0px;
```

```
overflow:hidden;
```

```
}
```

```
.navbar a{
```

```
text-decoration:none;
```

```
color:white;
```

```
display:block;
```

```
text-align:center;
```

```
padding:15px;
```

```
}
```

```
.navbar a:hover{
```

```
background-color:rgb(32, 16, 16);
```

```
}
```

```
.navbar li{
```

```
float:right;
```

```
}
```

```
.donorinfo{
```

```
display:flex;
```

```
justify-content:center;
```

```
align-items:center;
```

```
flex-wrap:wrap;
```

```
}
```

```
.donorinfo img{
```

```
width:400px;
```

```
height:300px;
```

```
margin:100px;
```

```
padding:10px;
```

```
border-radius:13px;
```

```
box-shadow:0px 0px 10px black;
```

```
cursor:pointer;
```

```
transition:0.15s;
```

```
}
```

```
.donorinfo img:hover{
```

```
filter:brightness(1);
```

```
transform:scale(1.03);  
  
}
```

```
.de h3{  
  
    margin-left:355px;  
  
    margin-top:-70px;  
  
    font-size:25px;  
  
}
```

```
.he h3{  
  
    margin-left:985px;  
  
    margin-top:-60px;  
  
    font-size:25px;  
  
}
```

```
.donorinfos{  
  
    display:flex;  
  
    justify-content:center;  
  
    align-items:center;  
  
    flex-wrap:wrap;  
  
}
```

```
.donorinfos img{  
  
    width:400px;  
  
    height:300px;
```

```
margin:100px;
```

```
padding:3px;
```

```
border-radius:13px;
```

```
box-shadow:0px 0px 10px black;
```

```
cursor:pointer;
```

```
transition:0.15s;
```

```
}
```

```
.donorinfos img:hover{
```

```
filter:brightness(1);
```

```
transform:scale(1.03);
```

```
}
```

```
.des h3{
```

```
margin-left:340px;
```

```
margin-top:-70px;
```

```
font-size:25px;
```

```
}
```

```
.hes h3{
```

```
margin-left:935px;
```

```
margin-top:-60px;
```

```
font-size:25px;
```

```
}
```

</style>

<body>

<nav class="navbar">

Logout

About Us

Blood banks

Request

Home

</nav>

<div class="main">

</div>

<div class="donorinfo">

</div>

<div class="de">

<h3>Post Donor Info</h3>

</div>

<div class="he">

<h3>My Donor Info</h3>

</div>

<div class="donorinfos">

</div>

<div class="des">

<h3>Search donar details</h3>

</div>

<div class="hes">

<h3>Search Blood bank details</h3>

</div>

</body>

</html>

Result


Home Page:

**Apollo Blood Management Service Pvt.**[Home](#) [About](#) [Contact](#) [Donate](#) [Login/Register](#) [Logout](#)


Image Gallery



Our dedicated staff providing exceptional care to our patients. We prioritize health and wellness.




Journey of an outpatient...




Experience Apollo Hos...


Our Achievements



Achievement 1.



Achievement 2.



Achievement 3.


About Page:

About Us

Introduction

Apollo Hospital is a leading healthcare provider, dedicated to delivering exceptional medical services and ensuring the highest standards of patient care.

Founder



The hospital was founded by Dr. Prathap C. Reddy, a visionary leader in the healthcare sector, whose mission has always been to bring world-class healthcare to India.

Services Provided

Contact Us Page:

Contact Us

Get in Touch

If you have any questions or need further information, feel free to reach out to us.

Contact Details

Phone: +91 123 456 7890
Email: info@apollohospital.com
Address: Apollo Hospital, 1-2-3, Street Name, City, State, ZIP Code

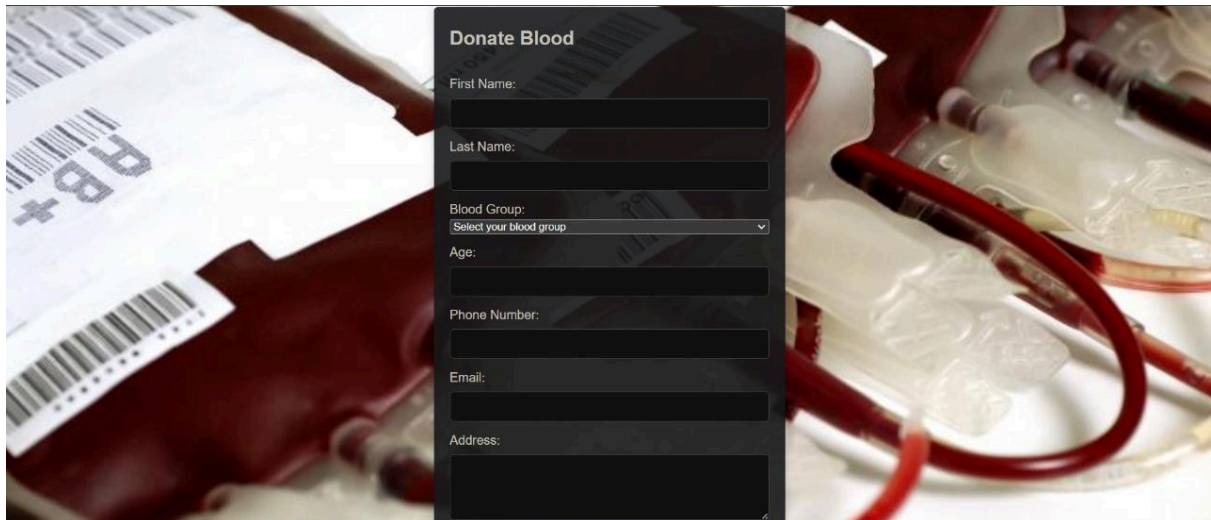
Feedback Form

Name:

Email:

Message:

Donate Page:



Donate Blood

First Name:

Last Name:

Blood Group:

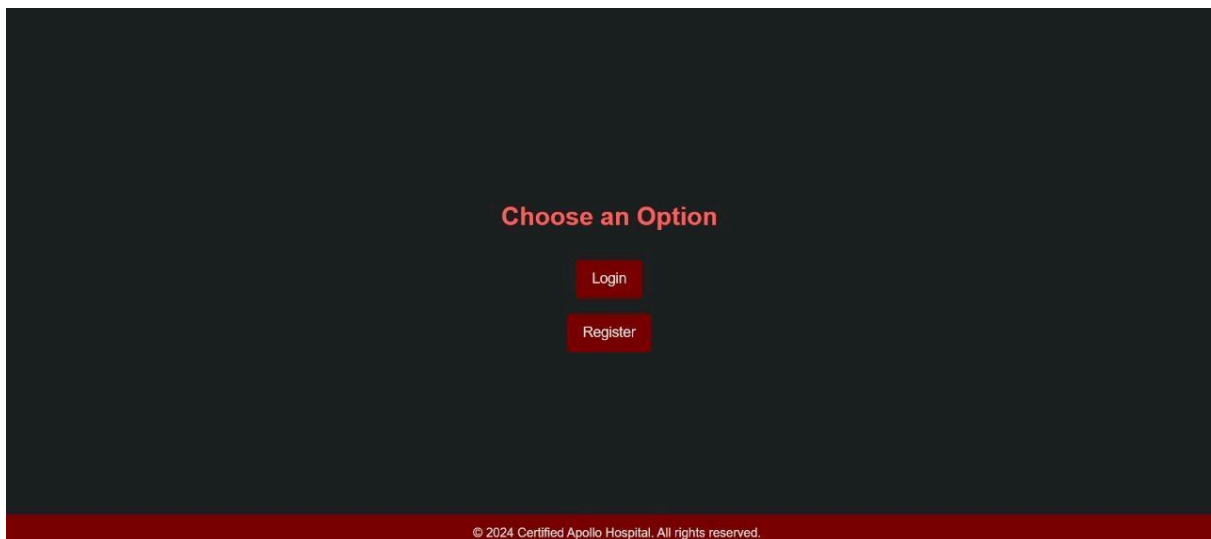
Age:

Phone Number:

Email:

Address:

Login / Register Options:



Choose an Option

[Login](#)

[Register](#)

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Login Options

User Login

Admin Login

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REGISTER ACCOUNT

Username:

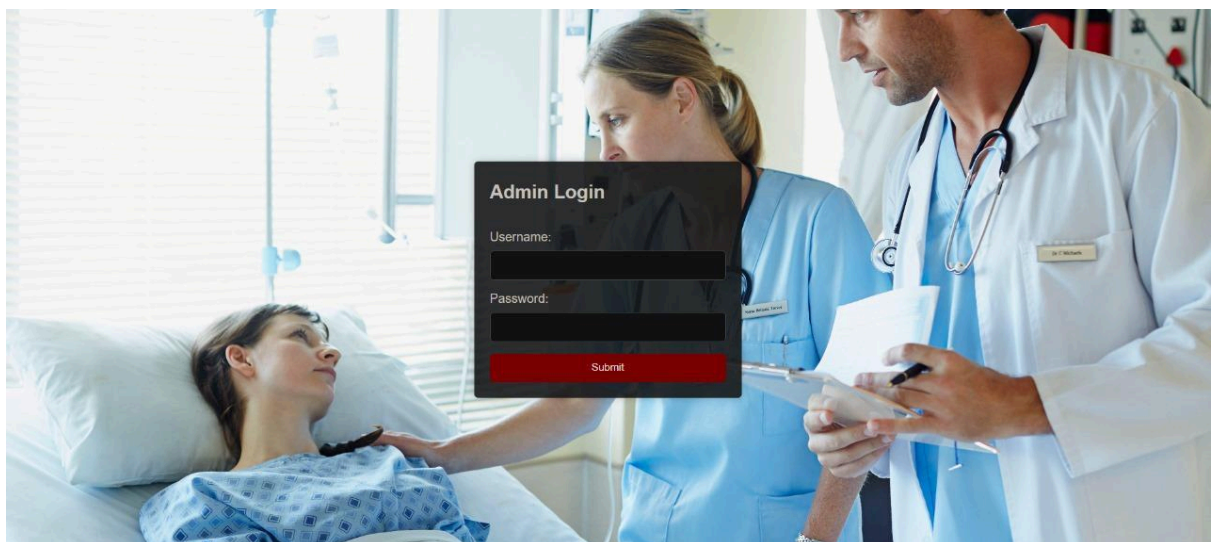
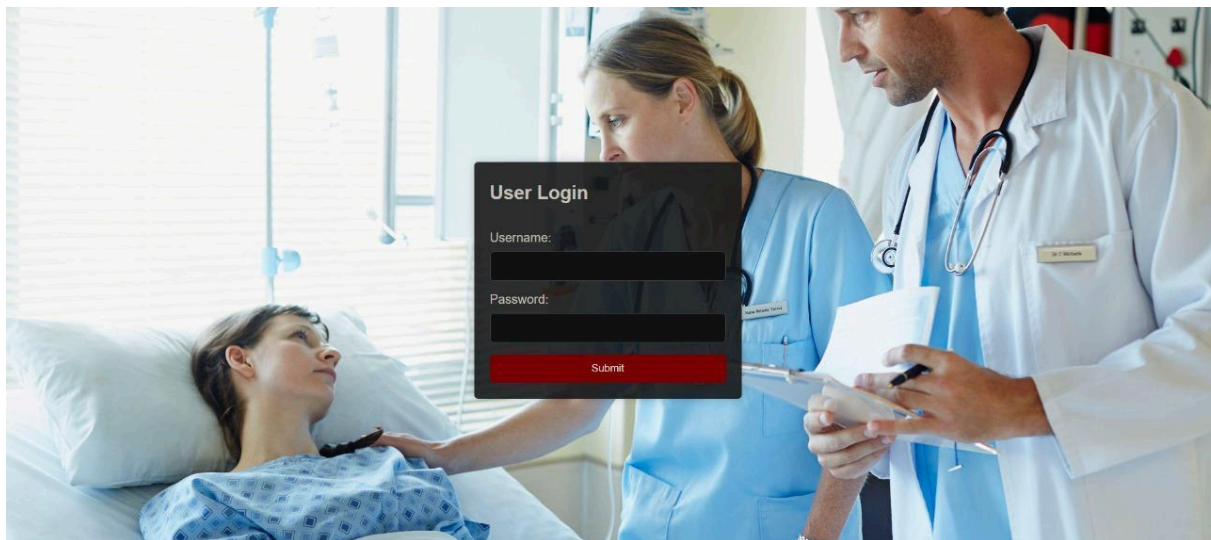
Password:

Email:

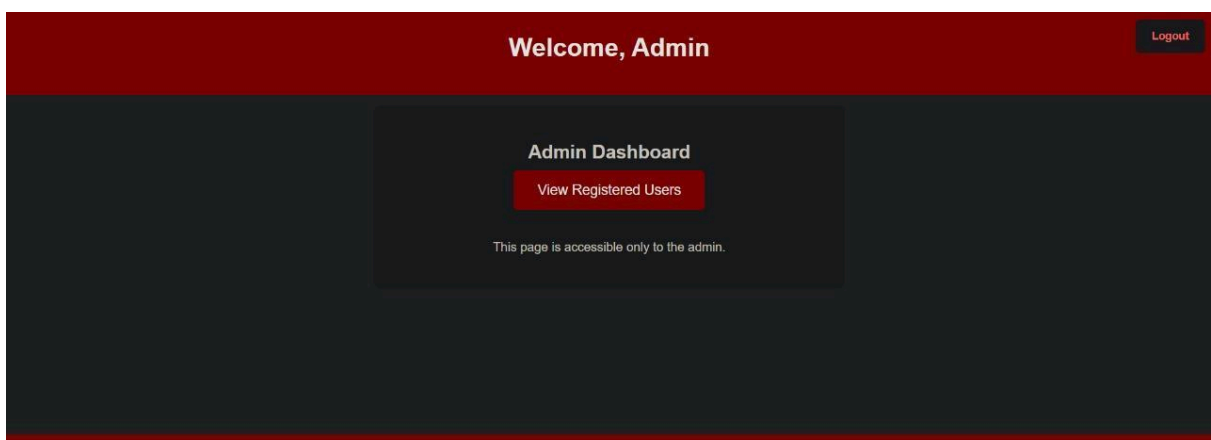
Phone Number:

Register

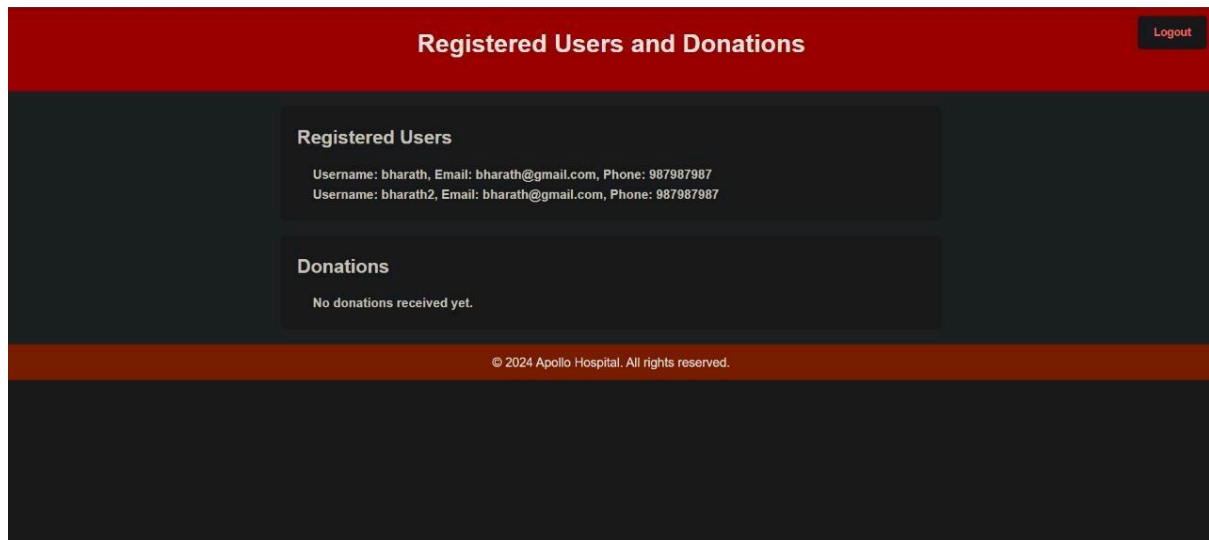
User / Admin Login Page:



Admin Home Page:



Registered Users and Donations:



Conclusion

The Blood Bank Management System successfully addresses the problem of inefficient blood donation management by providing a centralized platform for both donors and healthcare institutions. In the future, this system can be enhanced by integrating features like mobile notifications, automated blood drive scheduling, and a machine-learning-based prediction system for blood demand.

References

1. W3Schools. "HTML Tutorial."
2. MDN Web Docs. "JavaScript Guide."
3. PHP Documentation. "Working with MySQL Databases."
4. Bootstrap. "Building Responsive Web Pages."