## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**Belagavi-590014, Karnataka**



**A Database Management System Mini Project Report on**

## BLOOD BANK MANAGEMENT SYSTEM

#### Submitted in Partial fulfillment of the Requirements for the V Semester of the Degree of

**Bachelor of Engineering In Information Science and Engineering**

**By**

**Simranjeet Singh**

**(3GN21IS042)**

**Under the Guidance of**

**Prof. Margesh Keskar**



# DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

# GURU NANAK DEV ENGINEERING COLLEGE BIDAR

MAILOOR ,BIDAR KARANATAKA -585403

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MAILOOR ,BIDAR KARANATAKA -585403

## CERTIFICATE

This is to certify that the Database Management System Project work entitled **Blood Bank Management System** has been carried out by **Simranjeet Singh(3GN21IS042),** bonafide students of Guru Nanak Dev College Bidar in partial fulfillment for the Completion of 5th Sem of **Bachelor of Engineering** in **Information Science and Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2023-2024**. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. This DBMS Project Report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

**----------------- -------------------**

**Signature of Guide Signature of HOD**

**Mr. Margesh Keskar Mrs. Masrath Begum**

**Assistant Professor Professor, Head**

**Dept. of ISE, GNDEC Dept. of ISE, GNDEC**

External Viva

Name of the examiners Signature with date

1.

2.

**I**

**ACKNOWLEDGEMENT**

It gives us a great sense of pleasure to present the report of the B.E. Mini Project under taken during the 5th semester. We also take the opportunity to acknowledge the contribution of Mrs Masrath Begum Mam, HOD. of the Department of Information Science and Engineering, Guru Nanak Dev Engineering College Bidar, for his full support and assistance during the development of the project. It is only through his cognizant efforts that our endeavors have seen the light of day. We owe a special debt of gratitude to Mr. Margesh Keskar, Department of Information Science and Engineering, Guru Nanak Dev Engineering College Bidar, for her constant support and guidance throughout the course of our work. Her sincerity, thoroughness, and perseverance have been a constant source of inspiration for us. We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind assistance and cooperation during the development of our project. And last but not least, we acknowledge our friends for their contribution to the completion of the project.

Simranjeet Singh

**II**

### ABSTRACT

This project is aimed to developing an online Blood Donation Information. The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The Blood Donation Agent is to create an e-Information about the donor and organization that are related to donating the blood. Through this application any person who is interested in donating the blood can register himself in the same way if any organization wants to register itself with this site that can also register. Moreover if any general consumer wants to make request blood online he can also take the help of this site. Admin is the main authority who can do addition, deletion, and modification if required.

The project has been planned to be having the view of distributed architecture, with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MS-SQL Server and all the user interfaces have been designed using the ASP.Net technologies. The database connectivity is planned using the “SQL Connection” methodology. The standards of security and data protective mechanism have been given a big choice for proper usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the administrative staff.

The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The specification has been normalized up to 3NF to eliminate all the anomalies that may arise due to the database transaction that are executed by the general users and the organizational administration. The user interfaces are browser specific to give distributed accessibility for the overall system. The internal database has been selected as MS-SQL server 2000.The basic constructs of table spaces, clusters and indexes have been exploited to provide higher consistency and reliability for the data storage. The MS-SQL server 2000 was a choice as it provides the constructs of high-level reliability and security. The total front end was dominated using the HTML,CSS,PHP and Javasacript. At all proper levels high care was taken to check that the system manages the data consistency with proper business rules or validations. The database connectivity was planned using the latest “SQL Connection” technology provided by Microsoft Corporation. The authentication and authorization was crosschecked at all the relevant stages. The user level accessibility has been restricted into two zones namely.

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**Chapter1**

## INTRODUCTION

Blood transfusion safety remains an important public health concern in Oman. The availability of blood products of all blood types and the provision of its safety ensure public trust of its excellent healthcare system. However, lack of availability of these blood products and provision of unsafe blood products still impact morbidity and mortality in the Sultanate. Through the use of online blood bank management system, blood transfusion safety is expected to be enhanced or improved. Risks on improper blood donors’ documentation, and misplaced records can be minimized or totally avoided. Also, processes involving blood bag collection, storage, and inventory will be systematized and organized, hence, improving the healthcare management.

For hospitals, a blood bank known as blood collection center, also is an area in which collected blood bags are stored and preserved for future use in blood transfusion services. Blood transfusion is a medical operation where a patient requires blood or blood products as a life saving measure. . In an article1 published in Times of Oman in 2014, it was reported by Ministry of Health (MoH) that the total amount of blood donated annually in Muscat is approximately 25,084 units. MoH further reported that its Department of Blood Services is functioning at full capacity to meet the demands in the Sultanate

Most blood banks are still running manual system in its processes. As such, there is a lack of efficiency because it is still paper-based in collecting information about donors, inventories of blood bags, and blood transfusion services. The lack of proper documentation may endanger patients’ health due to the possibility of having contaminate blood bags. Contamination happened when there is an incomplete donors’ medical history record and the blood bags’ shelf life is not monitored properly. Hence, a web-based blood bank management system might be needed to address these issues and problems encountered to ensure blood transfusion safety.

**Chapter 2**

## SYSTEM REQUIREMENTS

To demonstrate and work with this project there few hardware and software requirements that are to be satisfied To work with any storage system we need a database installed into our system and as this project is made as an stand alone application any frontend tool can be used to design and develop it .The major Hardware and Software requirements are listed below.

### Hardware requirements

* + - Any modern updated Operating System (preferably 64-bit architecture)
    - Minimum of 4 GB Ram
    - The Disk space mainly depends on the size of data we will be dealing with ,but minimum of 1GB is sufficient

### Technologies Used

* + - WampServer Installed
    - VSCode

#### WAMPP(PhpMyAdmin):

#### PhpMyAdmin can manage a whole MySQL server as well as a single database. To

#### accomplish the later you'll need a properly set up MySQL user who can read/write

#### only the desired database. It's up to you to look up the appropriate part in the MySQL

#### manual.

#### ➢ browse and drop databases, tables, views, columns and indexes

#### ➢ create, copy, drop, rename and alter databases, tables, columns and indexes.

#### ➢ maintenance server, databases and tables, with proposals on server configuration.

#### ➢ execute, edit and bookmark any SQL-statement, even batch-queries

#### load text files into tables.➢ administer multiple servers

#### ➢ manage MySQL users and privileges

#### ➢ check referential integrity in MyISAM tables

#### ➢ using Query-by-example (QBE), create complex queries automatically connecting

#### required tables.

#### 2. VSCODE:

#### Visual Studio Code (VS Code) is a popular, free, open-source code editor developed by Microsoft. It's designed to be lightweight yet powerful, and it's highly customizable to suit the preferences and workflows of individual developers.

#### 2.1. PHP:

#### PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages.

#### PHP is a widely-used, free, and efficient alternative to competitors such as Microsoft's ASP.

#### 2.1.1: PDO :

#### In PHP, PDO stands for PHP Data Objects. It is a database access layer providing a uniform method of access to multiple databases.

#### PDO Connection:

#### new PDO($dsn, $username, $password, $options): Creates a new PDO object representing a connection to a database.

**Chapter 3**

## DESIGN

The overall design objective is to provide an efficient, modular design that will reduce the system’s complexity, facilitate change, and result in easy implementation for the blood bank management system. This will be achieved by designing a system with strong cohesion and minimal coupling. The purpose of the design phase is to develop a clear understanding of what the developers want people to gain from the project, focusing on the efficient management of blood donation, storage, and distribution processes.

The blood bank management system may be divided into two kinds: one is data-centric, focusing on data acquisition, database construction, and maintenance; the other is process-centric, emphasizing services such as blood inventory management, donation tracking, and distribution logistics. In this article, the blood bank management system is primarily process-centric.

#### Entity-Relationship Diagram: III

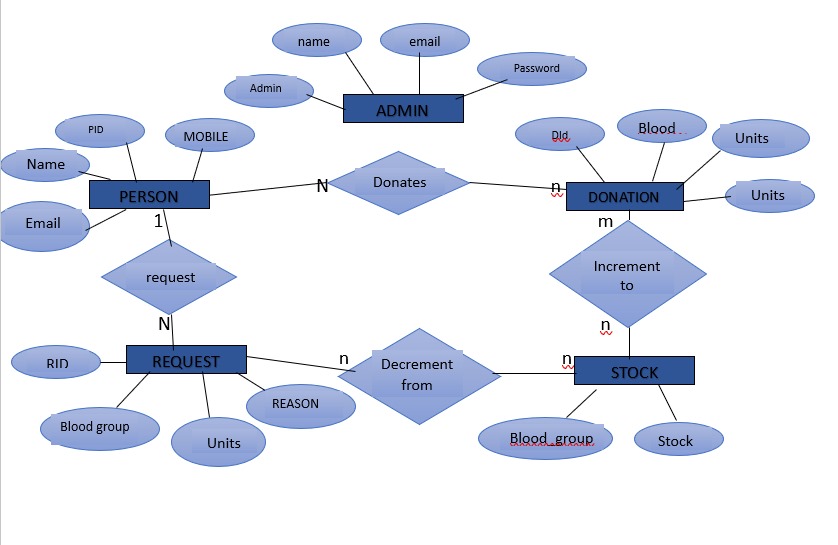
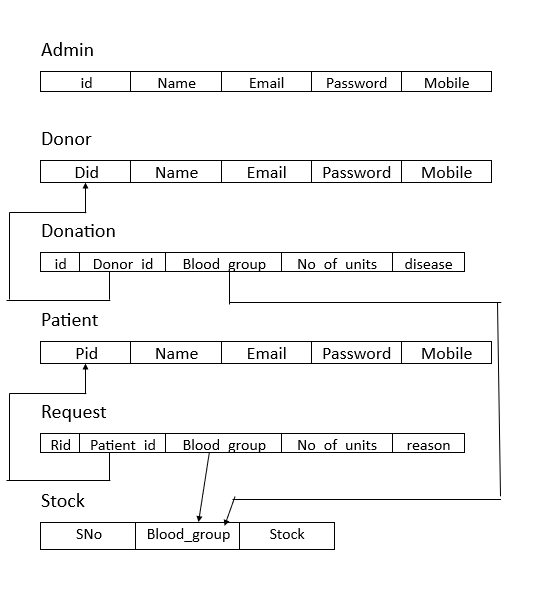


Figure 3.

**Schema for Blood Bank Management System:**

****

**Chapter 4**

## IMPLEMENTATION

Blood bank management systems contain information about blood donors, recipients, inventory, and distribution processes. Information is data that has been organized into a meaningful and useful format for human beings. Data, on the other hand, are raw facts representing events related to blood donations and storage before being processed into usable information.

Implementing a well-designed database is critical for efficient blood bank operations. A good database prevents anomalies and stores only relevant information in an organized manner. Anomalies, such as delete anomalies, can affect efficiency and data integrity by causing the loss of useful data when a row is deleted. Therefore, it’s essential to normalize the tables to ensure that the database provides unambiguous results.

As this is a complete web-based system, it consists of two main components: frontend and backend. Frontend refers to the design of the website or web application interface. Programming languages commonly used for frontend development include HTML, CSS, and JavaScript. Backend, on the other hand, involves server-side programming, which facilitates communication between the client interface, the database, and logic control. Programming languages commonly used for backend development include PHP, JavaScript, etc. Additionally, Bootstrap and CSS are utilized for design purposes

First, create a database according to the given ER diagram and Schema diagram. In Selected Schema, there are three tables: two normal tables and one relationship table.

#### Creating Tables In Created Database :

CREATE TABLE ADMIN(

ID INT PRIMARY KEY,

NAME VARCHAR(25),

EMAIL VARCHAR(25),

PASSWORD VARCHAR(10),

MOBILE BIGINT(10));

CREATE TABLE DONOR(

DID INT PRIMARY KEY,

DNAME VARCHAR(25),

EMAIL VRACHAR(25),

PASSWORD VARCHAR(10),

MOBILE BIGINT(10));

CREATE TABLE DONATION(

ID INT PRIMARY KEY,

DONOR\_ID INT(5) ,

BLOOD\_GROUP VARCHAR(5),

DISEASE VARCHAR(5),

FOREIGN KEY(DONOR\_ID) REFERENCES DONOR(DID) ON DELETE CASCADE,

FOREIGN KEY(BLOOD\_GROUP) REFERENCES STOCK(BLOOD\_GROUP)ON DELETE CASCADE);

CREATE TABLE PATIENT(

PID INT PRIMARY KEY,

PNAME VARCHAR(25),

EMAIL VRACHAR(25),

PASSWORD VARCHAR(10),

MOBILE BIGINT(10));

CREATE TABLE REQUEST(

RID INT PRIMARY KEY,

PATIENT\_ID INT(5) ,

BLOOD\_GROUP VARCHAR(5),

REASON VARCHAR(5),

FOREIGN KEY(PATIENT\_ID) REFERENCES PATIENT(PID) ON DELETE CASCADE,

FOREIGN KEY(BLOOD\_GROUP) REFERENCES STOCK(BLOOD\_GROUP)ON DELETE CASCADE):

CREATE TABLE STOCK(

BLOOD\_GROUP VARCHAR(5) PRIMARY KEY,

STOCK INT(5));

After creating the tables in the blood bank database, it is now time to develop the frontend of the project that connects the database to the server and provides a smooth user interface using HTML, CSS and PHP, which helps in the insertion of data into the database and retrieval of the required data using Query.

#### Code to Connect the Database:

<?php

$db = new PDO('mysql:host=localhost;dbname=BBMS;','root','root');

?>

**4.3 Code for front end:**

<?php

include('connection.php');

session\_start();

?>

<!DOCTYPE html>

<html>

<head>

<title> Home page</title>

<link rel="stylesheet" type="text/css" href="css/s3.css">

</head>

<body>

<header>

<div class="full">

<div class="inner\_full">

<div id="header"><h2>Blood Bank Management System</h2>

<nav>

<a href="index.php"> Home</a>

<a href="admin-login.php"> Admin</a>

<a href="donor-login.php"> Donor</a>

<a href="patient-login.php"> Patient</a>

</nav>

</div>

</div>

</div>

</header>

<div id="body">

<style>

body{

background-image:url("Doc1\_page-0001.jpg");

background-size:cover;

height: 200px;

width:100%

}

</style>

</div>

<footer>

<div id="footer"></div> </footer>

</body>

</html>

**4.4 Code for Admin login:**

<?php

include('connection.php');

session\_start();

?>

<!DOCTYPE html>

<html>

<head>

<title> Admin Login</title>

<link rel="stylesheet" type="text/css" href="style1.css">

</head>

<header>

<div class="full">

<div class="inner\_full">

<div id="header"><h2>Blood Bank Management System</h2>

<nav>

<a href="index.php"> Home</a>

<a href="admin-login.php"> Admin</a>

<a href="donor-login.php"> Donor</a>

<a href="patient-login.php"> Patient</a>

</nav>

</div>

</div>

</div>

</header>

<body>

<div id ="body">

<br><br><br><br><br><br><br>

<center> <div id="form">

<center><h1> Admin Login </center>

<br><br><br>

<form action="" method="post">

<table align="center">

<tr>

<td width="150px" height="50px"><b> Enter Username</b></td>

<td width="250px" height="50px"><input type="text" name="un" placeholder="Enter username" style="width:180px;height:40px;border-radius:10px;"></td>

</tr>

<tr>

<td width="100px" height="50px"><b>Enter Password</b></td>

<td width="250px" height="50px"><input type="password" name="ps" placeholder="Enter Password" style="width:180px;height:40px;border-radius:10px;"></td>

</tr>

<tr>

<td width="100px" align="center"><input type="submit" name="sub" value="Login" ></td>

</tr>

</table>

</form>

</div>

<?php

if(isset($\_POST['sub']))

{

$un=$\_POST['un'];

$ps=$\_POST['ps'];

$q=$db->prepare("SELECT \* FROM admin WHERE name='$un' && Password='$ps'");

$q->execute();

$res=$q->fetchAll(PDO::FETCH\_OBJ);

if($res)

{

$\_SESSION['Uname']=$un;

header("location:admin-home.php");

} else{

echo "<script>alert('wrong user')</script>";

}

}

?></div>

</body>

<footer><div id="footer"></div> </footer>

</html>

#### Code for insertion values :

#### 4.3.1 For donor:

#### <?php

#### include('connection.php');

#### session\_start();

#### ?>

#### <!DOCTYPE html>

#### <html>

#### <head>

#### <title> Donor Registration</title>

#### <link rel="stylesheet" type="text/css" href="style1.css">

#### </head>

#### <header>

#### <div class="full">

#### <div class="inner\_full">

#### <div id="header"><h2>Blood Bank Management System</h2>

#### <nav>

#### <a href="index.php"> Home</a>

#### <a href="admin-login.php"> Admin</a>

#### <a href="donor-login.php"> Donor</a>

#### <a href="patient-login.php"> Patient</a>

#### </nav>

#### </div>

#### </div>

#### </div>

#### </header>

#### <body>

#### <div id ="body">

#### <br><br><br><br><br><br><br>

#### <center> <div id="form" class="border">

#### <center><h1> Donor Registration </center>

#### <br><br><br>

#### <form action="" method="post">

#### <table align="center">

#### <tr>

#### <td width="150px" height="50px"><b> Name </b></td>

#### <td width="250px" height="50px"><input type="text" name="NAME" placeholder="Enter username" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Email</b></td>

#### <td width="250px" height="50px"><input type="text" name="EMAIL" placeholder="Enter username" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><b>Password</b></td>

#### <td width="250px" height="50px"><input type="password" name="PASSWORD" placeholder="Enter Password" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Mobile</b></td>

#### <td width="250px" height="50px"><input type="text" name="MOBILE" placeholder="Enter username" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><input type="submit" name="sub" value="save" ></td>

#### <td width="100px" height="50px"><a href='patient-login.php'> Already register? Login here</a></td>

#### </tr>

#### </table>

#### </form>

#### </div>

#### </div>

#### <?php

#### if(isset($\_POST['sub']))

#### {

#### $NAME=$\_POST['NAME'];

#### $EMAIL=$\_POST['EMAIL'];

#### $PASSWORD=$\_POST['PASSWORD'];

#### $MOBILE=$\_POST['MOBILE'];

#### $q=$db->prepare("INSERT INTO donor(NAME,EMAIL,PASSWORD,MOBILE) VALUES(:NAME,:EMAIL,:PASSWORD,:MOBILE)");

#### $q->bindValue('NAME',$NAME);

#### $q->bindValue('EMAIL',$EMAIL);

#### $q->bindValue('PASSWORD',$PASSWORD);

#### $q->bindValue('MOBILE',$MOBILE);

#### if($q->execute())

#### {

#### echo "<script>alert('Donor Registration Succesfull')</script>";

#### }

#### else

#### {

#### echo "<script>alert('Donor Registration Unsuccesfull')</script>";

#### }

#### }

#### 

#### ?>

#### </div>

#### 

#### </body>

#### <footer>

#### <div id="footer"></div>

#### </footer>

#### </body>

#### </html>

#### 4.3.2 For Patients:

#### <?php

#### include('connection.php');

#### session\_start();

#### ?>

#### <!DOCTYPE html>

#### <html>

#### <head>

#### <title> Patient login</title>

#### <link rel="stylesheet" type="text/css" href="style1.css">

#### </head>

#### <header>

#### <div class="full">

#### <div class="inner\_full">

#### <div id="header"><h2>Blood Bank Management System</h2>

#### <nav>

#### <a href="index.php"> Home</a>

#### <a href="admin-login.php"> Admin</a>

#### <a href="donor-login.php"> Donor</a>

#### <a href="patient-login.php"> Patient</a>

#### </nav>

#### </div>

#### </div>

#### </div>

#### </header>

#### <body>

#### <div id ="body">

#### <br><br><br><br><br><br><br>

#### <center> <div id="form" class="border">

#### <center><h1> Patient Registration </center>

#### <br><br><br>

#### <form action="" method="post">

#### <table align="center">

#### <tr>

#### <td width="150px" height="50px"><b> Name </b></td>

#### <td width="250px" height="50px"><input type="text" name="NAME" placeholder="Enter name" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Email</b></td>

#### <td width="250px" height="50px"><input type="text" name="EMAIL" placeholder="Enter Email" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><b>Password</b></td>

#### <td width="250px" height="50px"><input type="password" name="PASSWORD" placeholder="Enter Password" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Mobile</b></td>

#### <td width="250px" height="50px"><input type="text" name="MOBILE" placeholder="Enter Mobile" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><input type="submit" name="sub" value="save" ></td>

#### <td width="100px" height="50px"><a href='patient-login.php'> Already register? Login here</a></td>

#### </tr>

#### </table>

#### </form>

#### </div>

#### </div>

#### 

#### <?php

#### if(isset($\_POST['sub']))

#### {

#### $name=$\_POST['NAME'];

#### $email=$\_POST['EMAIL'];

#### $ps=$\_POST['PASSWORD'];

#### $mobile=$\_POST['MOBILE'];

#### $q=$db->prepare("INSERT INTO patients(NAME,EMAIL,PASSWORD,MOBILE) VALUES(:NAME,:EMAIL,:PASSWORD,:MOBILE)");

#### $q->bindValue('NAME',$name);

#### $q->bindValue('EMAIL',$email);

#### $q->bindValue('PASSWORD',$ps);

#### $q->bindValue('MOBILE',$mobile);

#### if($q->execute())

#### {

#### echo "<script>alert('Patient Registration Succesfull')</script>";

#### }

#### else

#### {

#### echo "<script>alert('Patient Registration Unsuccesfull')</script>";

#### }

#### }

#### 

#### ?>

#### </div>

#### 

#### </body>

#### <footer>

#### <div id="footer"></div>

#### </footer>

#### </body>

#### </html>

#### 4.3.3:Code for Donation list(retrieve the values ) :

#### <?php

#### include('connection.php');

#### session\_start();

#### ?>

#### <!DOCTYPE html>

#### <html>

#### <head>

#### <title> Donation list</title>

#### <link rel="stylesheet" type="text/css" href="css/s1.css">

#### <style type="text/css">

#### td{

#### width:200px;

#### height:150 px;

#### padding-top:20px;;

#### }

#### </style>

#### </head>

#### <header>

#### <div class="full">

#### <div class="inner\_full">

#### <div id="header"><h2>Blood Bank Management System</h2>

#### <nav>

#### <a href="admin-home.php"> Dashboard</a>

#### <a href="donor-list.php"> Donors</a>

#### <a href="patient-list.php"> Patients</a>

#### <a href="donation-list.php"> Donations</a>

#### <a href="request-list.php"> Requests</a>

#### <a href="logout.php"> logout</a>

#### </nav>

#### </div>

#### </div>

#### </div>

#### </header>

#### <body>

#### <div id="body"><br><br><br><br><br>

#### <center><h1><u>Manage Donation list</u></h1></center>

#### <center> <div id="form">

#### <table>

#### <tr>

#### <td><center><b>Donation Id</b></center></td>

#### <td><center><b>Donor Name</b></center></td>

#### <td><center><b>Mobile no.</b></center></td>

#### <td><center><b>Blood Group</b></center></td>

#### <td><center><b>Units(in ml)</b></center></td>

#### <td><center><b>Disease</b></center></td>

#### 

#### </tr>

#### 

#### <?php

#### $q=$db->query("SELECT ID,NAME,MOBILE,BLOOD\_GROUP,NO\_OF\_UNITS,DISEASE FROM donation, donor WHERE DID=DONOR\_ID");

#### while($r1=$q->fetch(PDO::FETCH\_OBJ))

#### {

#### ?>

#### <tr>

#### <td><center><b><font color="black"><?=$r1->ID; ?></center></td>

#### <td><center><b><font color="black"><?=$r1->NAME; ?> </center></td>

#### <td><center><b><font color="black"><?=$r1->MOBILE; ?> </center></td>

#### <td><center><b><font color="black"><?=$r1->BLOOD\_GROUP; ?> </center></td>

#### <td><center><b><font color="black"><?=$r1->NO\_OF\_UNITS; ?></center></td>

#### <td><center><b><font color="black"><?=$r1->DISEASE; ?></center></td>

#### 

#### </tr>

#### <?php

#### }

#### ?>

#### </table>

#### </div>

#### </body>

#### <footer>

#### <div id="footer"> </div>

#### </footer>

#### </html>

#### 4.3.3:Code for manage patients request list(retrieve the values ):

#### <?php

#### include('connection.php');

#### session\_start();

#### ?>

#### <!DOCTYPE html>

#### <html>

#### <head>

#### <title> Donor Home</title>

#### <link rel="stylesheet" type="text/css" href="style.css">

#### </head>

#### <header>

#### <div class="full">

#### <div class="inner\_full">

#### <div id="header"><h2>Blood Bank Management System</h2>

#### <nav>

#### <a href="patient-home.php">Dashboard</a>

#### <a href="patient-request.php"> Donate</a>

#### <a href="stock.php">Stock</a>

#### <a href="logout.php"> logout</a>

#### </nav>

#### </div>

#### </div>

#### </div>

#### </header>

#### <body>

#### <div id ="body">

#### <br><br><br><br><br>

#### <center> <div id="form">

#### <?php

#### $un=$\_SESSION['Uname'];

#### if(!$un)

#### {

#### header("Location:donor-login.php");

#### }

#### ?>

#### <h1> <center> Patient Request Form</h1><br>

#### 

#### <form action="" method="post">

#### <table align="center">

#### <tr>

#### <td width="150px" height="50px"><b> Name </b></td>

#### <td width="250px" height="50px"><input type="text" name="NAME" placeholder="Enter name" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Email</b></td>

#### <td width="250px" height="50px"><input type="text" name="EMAIL" placeholder="Enter Email" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><b>Password</b></td>

#### <td width="250px" height="50px"><input type="password" name="PASSWORD" placeholder="Enter Password" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Mobile</b></td>

#### <td width="250px" height="50px"><input type="text" name="MOBILE" placeholder="Enter Mobile" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Blood Group</b></td>

#### <td width="250px" height="50px"><input type="text" name="BLOOD\_GROUP" placeholder="Enter Mobile" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Units(in ml)</b></td>

#### <td width="250px" height="50px"><input type="text" name="NO\_OF\_UNITS" placeholder="Enter Mobile" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="150px" height="50px"><b> Reason></td>

#### <td width="250px" height="50px"><input type="text" name="DISEASE" placeholder="Enter Mobile" style="width:180px;height:40px;border-radius:10px;"></td>

#### </tr>

#### <tr>

#### <td width="100px" height="50px"><input type="submit" name="sub" value="save" ></td>

#### 

#### </tr>

#### </table>

#### </form>

#### </div>

#### </div>

#### 

#### <?php

#### if(isset($\_POST['sub']))

#### {

#### $name=$\_POST['NAME'];

#### $email=$\_POST['EMAIL'];

#### $ps=$\_POST['PASSWORD'];

#### $mobile=$\_POST['MOBILE'];

#### $q=$db->prepare("INSERT INTO patients(NAME,EMAIL,PASSWORD,MOBILE) VALUES(:NAME,:EMAIL,:PASSWORD,:MOBILE)");

#### $q->bindValue('NAME',$name);

#### $q->bindValue('EMAIL',$email);

#### $q->bindValue('PASSWORD',$ps);

#### $q->bindValue('MOBILE',$mobile);

#### $BLOOD\_GROUP=$\_POST['BLOOD\_GROUP'];

#### $units=$\_POST['NO\_OF\_UNITS'];

#### $r=$\_POST['REASON'];

#### $q=$db->prepare("INSERT INTO request(BLOOD\_GROUP,NO\_OF\_UNITS,DISEASE) VALUES(:BLOOD\_GROUP,:NO\_OF\_UNITS,:DISEASE)");

#### $q->bindValue('BLOOD\_GROUP',$BLOOD\_GROUP);

#### $q->bindValue('NO\_OF\_UNITS',$units);

#### $q->bindValue('REASON',$r);

#### 

#### if($q->execute())

#### {

#### echo "<script>alert('Patient Request Succesfull')</script>";

#### }

#### else

#### {

#### echo "<script>alert('Patient Request Unsuccesfull')</script>";

#### }

#### 

#### 

#### }

#### ?>

#### </div>

#### </body>

#### <footer>

#### <div id="footer"></div>

#### </footer>

#### </html>

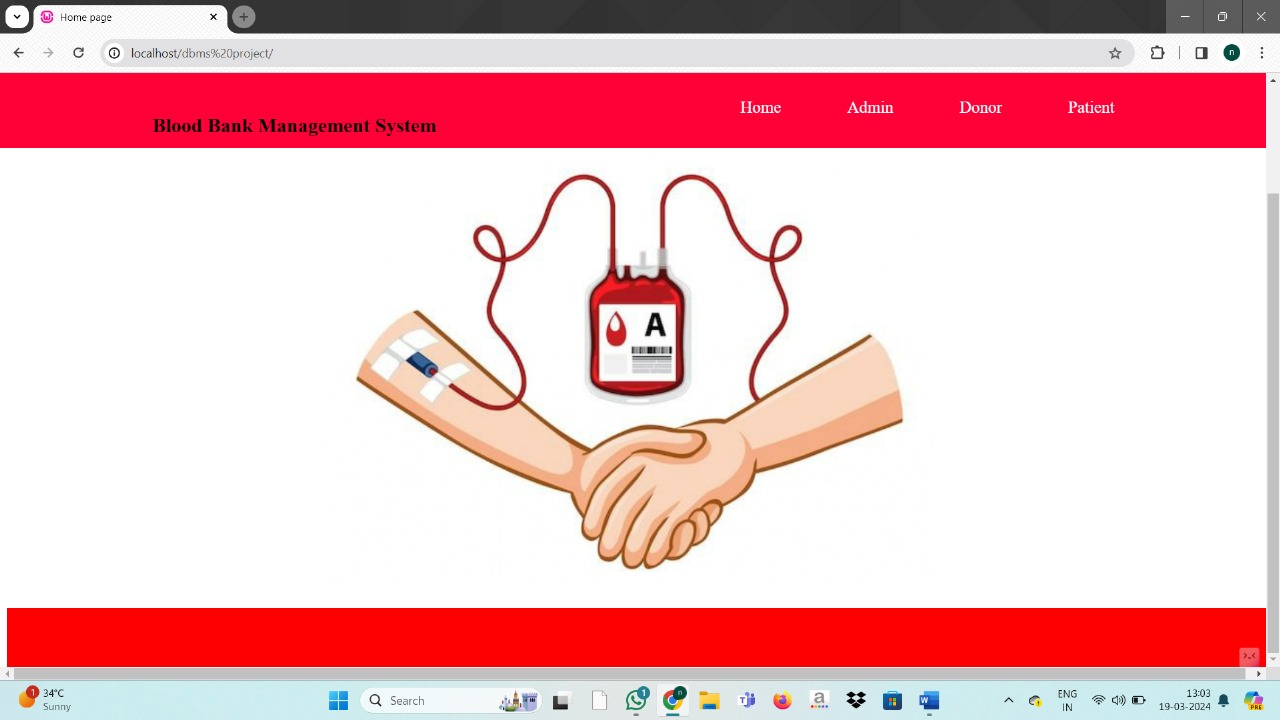
**Chapter 5**

## DISCUSSION AND SCREENSHOTS

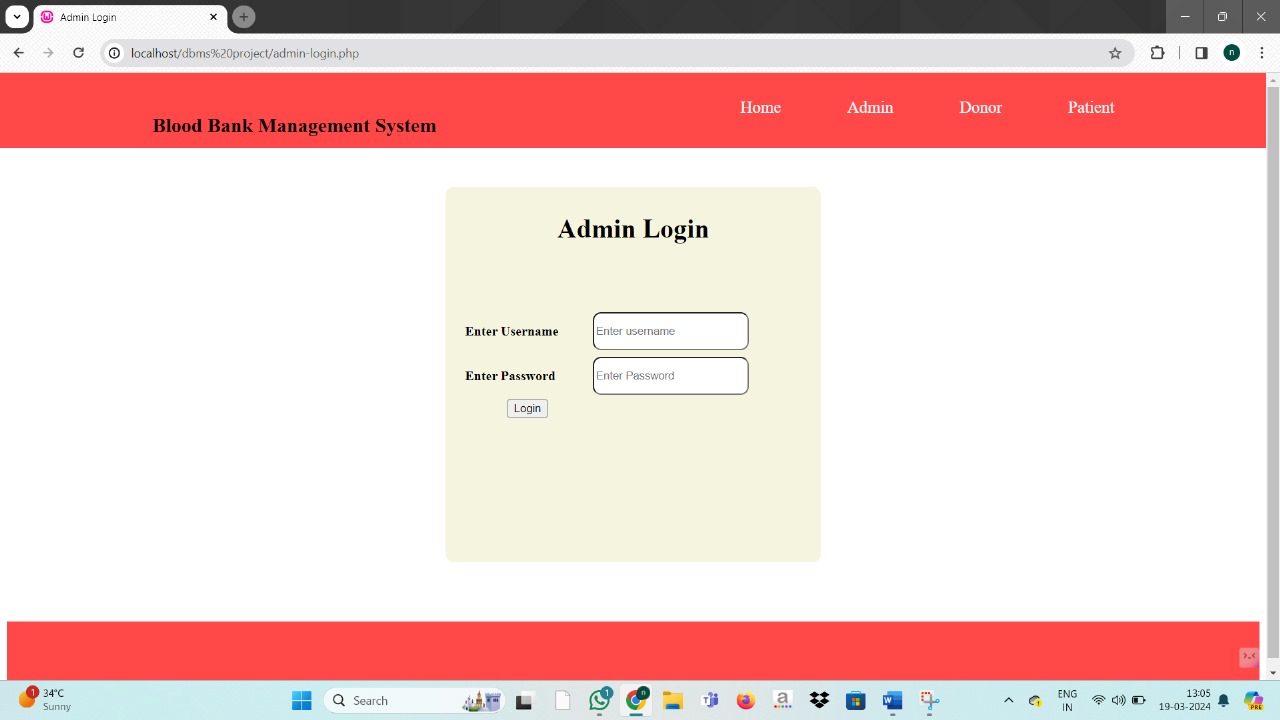
The management of blood banks holds immense significance in healthcare systems worldwide, ensuring the availability of safe blood transfusions for patients in need. Traditional blood bank systems face challenges such as manual record-keeping, inventory management issues, and difficulties in matching donors with recipients. These challenges underscore the need for innovative solutions to streamline blood bank operations, enhance donor engagement, and improve patient outcomes.

The proposed Blood Bank Management System offers a comprehensive solution to address these challenges and revolutionize blood bank services. By leveraging technology, such as mobile applications, wearable device integration, and advanced analytics, the system aims to improve donor recruitment, donation tracking, and blood inventory management. Moreover, features like geolocation services and blood type matching algorithms can enhance accessibility and ensure timely access to compatible blood products, thereby reducing the risk of transfusion-related complications.

Looking ahead, the future scope of the project includes opportunities for further innovation and collaboration. Emerging technologies like artificial intelligence, blockchain, and telemedicine hold the potential to further enhance the capabilities of the system and address evolving healthcare needs. Ethical considerations, including donor privacy, consent, and regulatory compliance, must be carefully addressed to ensure the safety and integrity of blood transfusion services. Through continued research, innovation, and investment, the Blood Bank Management System can contribute to the broader goal of ensuring universal access to safe and sufficient blood supplies, ultimately saving lives and improving public health



The Figure 5.1 is the main login page for the application

**Figure 5.2 Admin Login**

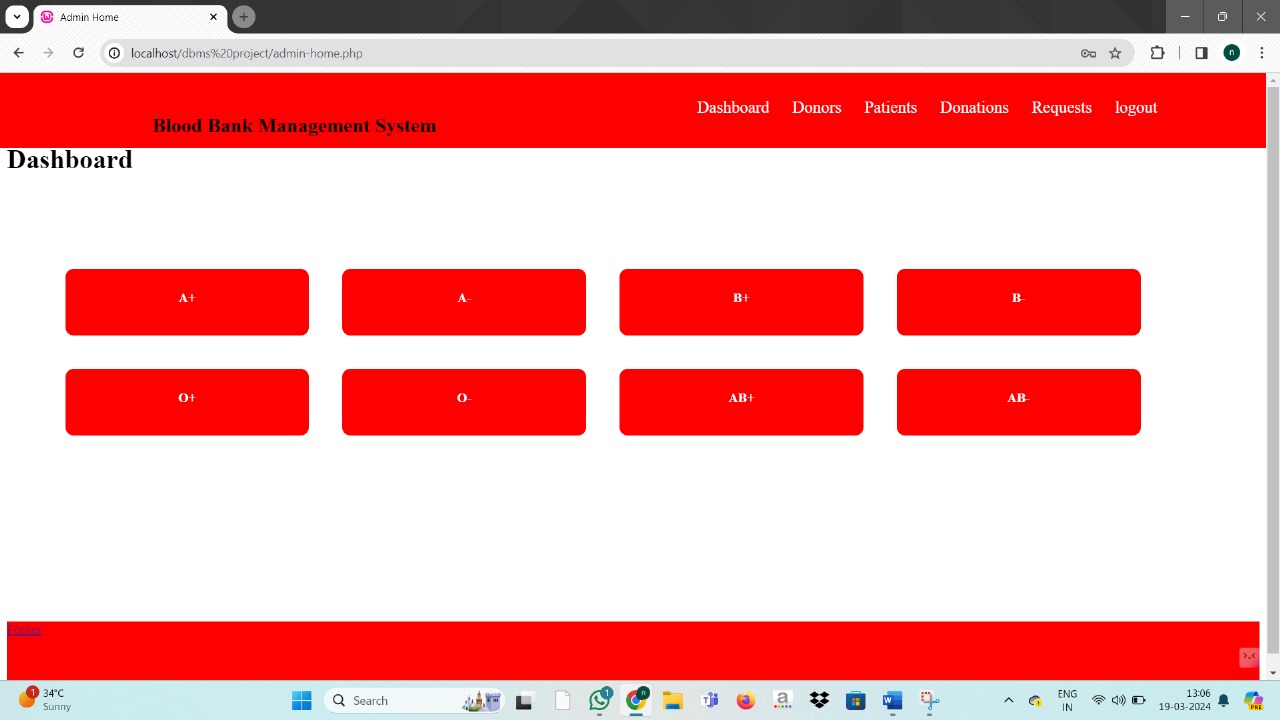


Figure 5.3 Dashboard

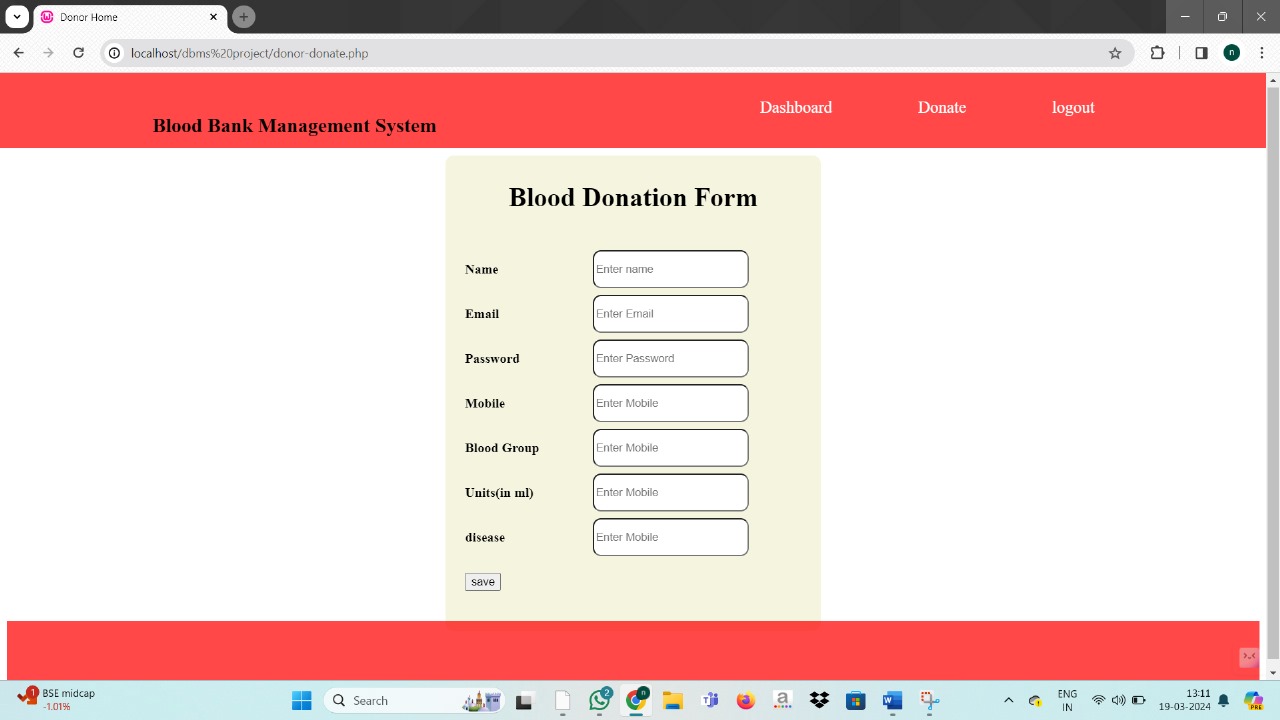


Figure 5.4 Blood Donation Form

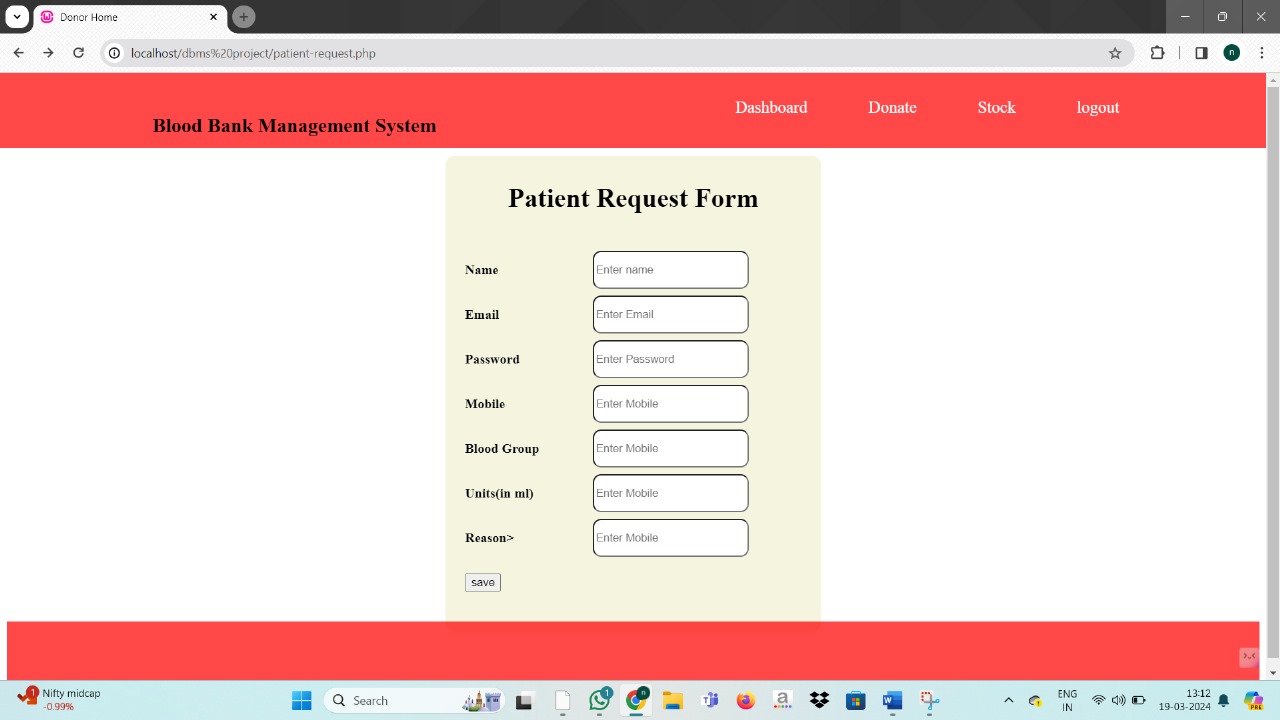


Figure 5.8 Patient Request Form

**Chapter 6**

## CONCLUSION AND FUTURE SCOPE

Based on results, this study concluded that online blood bank management system is much better than the manual system. The findings showed that respondents prefer to use online blood bank management system rather than the manual system because it offers many advantages and benefits that lead to its effectiveness, and efficiency. Because of the increased confidence on the users on the system, it can be concluded that the online blood bank management system enhances blood transfusion safety because it provides better ways of handling the various processes in blood bank.

In the future, your Blood Bank Management System project could expand its scope in various directions. You could consider developing a mobile application version to enhance accessibility and provide features like donation reminders and appointment scheduling. Integration with wearable health devices could offer real-time health monitoring for donors and improve eligibility assessments. Advanced analytics and reporting capabilities could help optimize operations and forecast blood demand more accurately. Geolocation services could be integrated to help users find nearby donation centers and hospitals in need of blood. Implementing a blood type matching algorithm could streamline donor-recipient matching, while telemedicine integration could facilitate remote consultations for pre-donation screening and education. Blockchain technology could enhance the security and traceability of donation transactions. Community engagement features, such as social networking and event organization, could foster a sense of community among donors and recipients. Machine learning algorithms could be used to predict donation trends and recommend targeted recruitment strategies. Finally, ensuring accessibility and inclusivity for all users should be a priority, with features like multilingual support and compatibility with assistive technologie

## REFERENCES

* + 1. Fundamentals of Database Systems, Ramez Elmasri and Shamkant B. Navathe, 7 7th Edition, 2017, Pearson.
    2. W3Schools
    3. Chatgpt
    4. geeksforgeeks