

# **BLOOD DONATION MANAGEMENT SYSTEM**

## **A MINI PROJECT REPORT**

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BONAFIDE CERTIFICATE**

Certified that this project report "**Blood Donation Management System**"  
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## **ABSTRACT**

Blood donation is a critical activity that ensures the availability of blood to those in need during medical emergencies. Our project, "Blood Donation Management System," is designed to streamline the process of donor registration, blood bank management, and recipient matching.

The system provides an interface for donors, administrators, and hospitals to efficiently manage donations and requests. This project aims to reduce manual errors and enhance the accessibility of blood banks using a database-driven system. Developed using PHP and MySQL on a Mac PC with XAMPP, the system ensures scalability and reliability.

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## CHAPTER – 1

### INTRODUCTION

#### 1.1 INTRODUCTION

The "Blood Donation Management System" aims to streamline the process of managing blood donors, blood availability, and recipient requests. The project provides essential information regarding donor registrations, bloodstock, and matching recipients in need, thereby enhancing the efficiency and accessibility of blood donation services. This system ensures that vital information is presented in an organized manner for users' convenience.

#### 1.2 SCOPE OF THE WORK

The "Blood Donation Management System" bridges the gap between donors and recipients, making it easier for hospitals and blood banks to manage supply and demand. By automating key processes and maintaining accurate records, this system addresses the growing need for organized blood donation services, ensuring quicker access and better resource management.

#### 1.3 PROBLEM STATEMENT

Despite the critical role of blood donations in saving lives, the lack of an efficient system leads to manual errors, delays, and challenges in meeting urgent needs. Many blood banks and

hospitals struggle to manage the donor database and match donors with recipients effectively. This project aims to address these issues by providing a user-friendly platform that ensures timely and accurate blood availability and donor-recipient matching.

#### **1.4 AIM AND OBJECTIVES OF THE PROJECT**

The primary aim of this project is to build an efficient and reliable system to manage blood donations, ensuring seamless coordination between donors, hospitals, and blood banks. The objectives include:

1. Automating the donor registration process.
2. Maintaining real-time data on blood availability.
3. Facilitating efficient matching of donors and recipients.
4. Enhancing accessibility and ease of use for stakeholders.

## **CHAPTER – 2**

### **SYSTEM SPECIFICATIONS**

#### **2.1 HARDWARE SPECIFICATIONS**

Processor: Intel i5 or equivalent

Memory Size: 8GB (Minimum)

Storage (HDD): 1 TB (Minimum)

#### **2.2 SOFTWARE SPECIFICATIONS**

Operating System: macOS or Windows (with XAMPP installed)

Front-End: PHP

Back-End: MySQL

Development Environment: XAMPP (PHP,

MySQL) Languages: PHP, SQL

# **CHAPTER - 3**

## **MODULE DESCRIPTION**

This application consists of two main modules. When the program runs, users will be directed to a login window. Based on their credentials, they can log in as an Administrator or a Donor (User). The description of the modules is as follows:

### **3.1 Admin Login**

When an individual logs in as an Administrator, they are required to enter their username and password. Upon successful login, the Administrator has the authority to:

- Add, update, and delete blood details.
- Manage donor information.
- View real-time blood availability and analytics.

The Administrator has full control over the database and ensures that all data is accurate and up to date.

### **3.2 Donor (User) Login**

When a person logs in as a Donor, they can access the following features:

- View Blood Availability: Check the available blood groups and their respective quantities.
- Donate Blood: Submit a request or schedule a blood donation.
- Search Donors: Look up donor details (if enabled) for emergencies or referrals.

# **CHAPTER - 4**

## **SAMPLE CODING**

### **Sample 1: Donor Registration Code**

```
<?php
include('includes/header.php');
include('includes/navbar.php');

if (isset($_POST['name'])) {
    $name = $_POST["name"];
    $guardiansname = $_POST["guardiansname"];
    $gender = $_POST["gender"];
    $dob = $_POST["dob"];
    $weight = $_POST["weight"];
    $bloodgroup = $_POST["bloodgroup"];
    $email = $_POST["email"];
    $address = $_POST["address"];
    $contact = $_POST["contact"];
    $username = $_POST["username"];
    $password = $_POST["password"];

    include 'admin/dbconnect.php';

    $qry = "INSERT INTO donor(name, guardiansname, gender, dob, weight,
bloodgroup, email, address, contact, username, password)
```

```

VALUES ('$name', '$guardiansname', '$gender', '$dob', '$weight',
'$bloodgroup', '$email', '$address', '$contact', '$username', '$password')";
$result = mysqli_query($conn, $qry);

if (!$result) {
    echo "ERROR";
} else {
    echo "<div class='text-center text-success'><h1>Registration Successful!</h1>";
    echo "<a href='index.php'><h3>Go Back</h3></a>";
}
}

?>

<!-- HTML FORM FOR REGISTRATION -->
<h2 class="text-center text-danger">Register as a Donor!</h2>
<div class="container mx-5">
    <!-- Add your form code here -->
</div>

<script>
    function myFunction() {
        var x = document.getElementById("myInput");
        x.type = x.type === "password" ? "text" : "password";
    }

    function validate() {
        var email = document.getElementById("email").value;
        var mobNo = document.getElementById("contact").value;
        var currYear = new Date().getFullYear();
        var dob = document.getElementById("dob").value;
        var year = dob.split('-')[0];
        var age = currYear - year;
        var weight = document.getElementById("weight").value;

        if (email.indexOf('@') <= 0) {
            document.getElementById('email-msg').innerHTML = "Please enter a valid email.";
            return false;
        }
        if (mobNo.length !== 10 || isNaN(mobNo)) {
            document.getElementById('mob-msg').innerHTML = "Enter a 10-digit contact number.";
            return false;
        }
        if (age < 18 || age > 65) {
            document.getElementById("age-msg").innerHTML = "Donors must be between 18-65 years.";
            return false;
        }
        if (weight < 50) {
            document.getElementById("weight-msg").innerHTML = "Donors must weigh at least 50 kg.";
            return false;
        }
    }
</script>
```

```

        return true;
    }
</script>
<?php
include('includes/footer.php');
?>
```

## Sample 2: SQL Database Schema and Sample Data

```
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET time_zone = "+00:00";
```

```
CREATE TABLE IF NOT EXISTS `admin` (
  `user_id` int(11) NOT NULL,
  `username` varchar(50) NOT NULL,
  `password` varchar(50) NOT NULL,
  `name` varchar(50) NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `admin` (`user_id`, `username`, `password`, `name`)
VALUES (2, 'admin', 'admin', 'admin');
```

```
CREATE TABLE IF NOT EXISTS `announce` (
  `id` int(11) NOT NULL,
  `announcement` varchar(50) NOT NULL,
  `bloodneed` varchar(3) NOT NULL,
  `dat` date NOT NULL,
  `organizer` varchar(50) NOT NULL,
  `requirements` text NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=3 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `announce` (`id`, `announcement`, `bloodneed`, `dat`,
`organizer`, `requirements`) VALUES
(1, 'DEMO ANNOUNCEMENT', 'B+', '2018-06-24', 'Helping Hands', 'Weight at least
50kg, No alcohol intake in 24hrs prior to donation, light meal should be taken before
donation, be in good health, must be 18 years old and must have at least 3 month interval
than the last donation.');
```

```
CREATE TABLE IF NOT EXISTS `blood` (
  `id` int(11) NOT NULL,
  `name` varchar(20) NOT NULL,
  `gender` varchar(20) NOT NULL,
  `dob` date NOT NULL,
  `weight` int(11) NOT NULL,
  `bloodgroup` varchar(3) NOT NULL,
  `address` varchar(20) NOT NULL,
  `contact` varchar(10) NOT NULL,
  `bloodqty` int(11) NOT NULL,
  `collection` date NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=19 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `blood` (`id`, `name`, `gender`, `dob`, `weight`, `bloodgroup`,
`address`, `contact`, `bloodqty`, `collection`) VALUES
(3, 'shawn mendez', 'M', '1997-05-26', 60, 'B-', 'los', '8521479633', 310, '2018-02-20');
```

```
CREATE TABLE IF NOT EXISTS `campaigndb` (
  `id` int(11) NOT NULL,
  `cname` varchar(50) NOT NULL,
  `oname` varchar(50) NOT NULL,
  `phn` int(10) NOT NULL,
  `cdate` date NOT NULL,
  `descp` text NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=10 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `campaigndb` ('id', `cname`, `oname`, `phn`, `cdate`, `descp') VALUES (8, 'Saving Lives Together', 'demo organizer', 1597534560, '2018-06-21', 'Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.');
```

```
CREATE TABLE IF NOT EXISTS `donor` (
  `id` int(11) NOT NULL,
  `name` varchar(20) NOT NULL,
  `guardiansname` varchar(20) NOT NULL,
  `gender` varchar(20) NOT NULL,
  `dob` date NOT NULL,
  `weight` int(11) NOT NULL,
  `bloodgroup` varchar(3) NOT NULL,
  `email` varchar(20) NOT NULL,
  `address` varchar(20) NOT NULL,
  `contact` varchar(10) NOT NULL,
  `username` varchar(20) NOT NULL,
  `password` varchar(20) NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=24 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `donor` ('id', `name`, `guardiansname`, `gender`, `dob`,
`weight`, `bloodgroup`, `email`, `address`, `contact`, `username`, `password`)
VALUES (18, 'Demo User', 'demo', 'M', '2020-09-03', 51, 'b+',
'demo@demo.com', 'demo', '8520002500', 'demo', 'demo');
```

```
CREATE TABLE IF NOT EXISTS `users` (
  `user_id` int(11) NOT NULL,
  `username` varchar(50) NOT NULL,
  `password` varchar(50) NOT NULL,
  `donorname` varchar(50) NOT NULL
) ENGINE=InnoDB AUTO_INCREMENT=2 DEFAULT CHARSET=latin1;
```

```
INSERT INTO `users` ('user_id', `username`, `password`, `donorname`)
VALUES (1, 'user', 'pass', 'harryden');
```

```
ALTER TABLE `admin` ADD PRIMARY KEY (`user_id`);
ALTER TABLE `announce` ADD PRIMARY KEY (`id`);
ALTER TABLE `blood` ADD PRIMARY KEY (`id`);
ALTER TABLE `campaigndb` ADD PRIMARY KEY (`id`);
ALTER TABLE `donor` ADD PRIMARY KEY (`id`);
ALTER TABLE `users` ADD PRIMARY KEY (`user_id`);
ALTER TABLE `admin` MODIFY `user_id` int(11) NOT NULL
AUTO_INCREMENT, AUTO_INCREMENT=3;
ALTER TABLE `announce` MODIFY `id` int(11) NOT NULL
```

```

AUTO_INCREMENT, AUTO_INCREMENT=3;
ALTER TABLE `blood` MODIFY `id` int(11) NOT NULL
AUTO_INCREMENT, AUTO_INCREMENT=19;
ALTER TABLE `campaigndb` MODIFY `id` int(11) NOT NULL
AUTO_INCREMENT, AUTO_INCREMENT=10;
ALTER TABLE `donor` MODIFY `id` int(11) NOT NULL
AUTO_INCREMENT, AUTO_INCREMENT=24;
ALTER TABLE `users` MODIFY `user_id` int(11) NOT NULL
AUTO_INCREMENT, AUTO_INCREMENT=2;

```

### Sample 3:Donor Information Update Form

```

<!DOCTYPE html>
<html lang="en">

<head>
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta name="description" content="">
<meta name="author" content="">
<title>BDMS</title>
<link href="../vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
<link href="../vendor/metisMenu/metisMenu.min.css" rel="stylesheet">
<link href="../dist/css/sb-admin-2.css" rel="stylesheet">
<link href="../vendor/font-awesome/css/font-awesome.min.css" rel="stylesheet"
type="text/css">
<link rel="stylesheet" href="../icofont/icofont.min.css">
</head>

<body>
<div id="wrapper">
<?php include 'includes/nav.php' ?>
<div id="page-wrapper">
<div class="row">
<div class="col-lg-12">
<h1 class="page-header">BDMS</h1>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<div class="panel panel-default">
<div class="panel-heading">MESSAGE BOX</div>
<div class="panel-body">
<div class="row">
<div class="col-lg-6">
<form role="form" action="updateDonor.php" method="post">
<div class="form-group">
<label>Name</label>
<input class="form-control" name="name" value="<?php echo
$name; ?>" required>
</div>
<div class="form-group">
```

```

        <label>Guardian's Name</label>
        <input class="form-control" name="guardiansname"
value=<?php echo $guardiansname; ?>" required>
            </div>
            <div class="form-group">
                <label>Gender</label>
                <select class="form-control" name="gender">
                    <option value="M" <?php if($gender == "M") echo 'selected'; ?>>Male</option>
                    <option value="F" <?php if($gender == "F") echo 'selected'; ?>>Female</option>
                </select>
            </div>
            <div class="form-group">
                <label>Date of Birth</label>
                <input class="form-control" type="date" name="dob"
value=<?php echo $dob; ?>" required>
            </div>
            <div class="form-group">
                <label>Weight (kg)</label>
                <input class="form-control" name="weight" value=<?php echo
$weight; ?>" required>
            </div>
            <div class="form-group">
                <label>Blood Group</label>
                <input class="form-control" name="bloodgroup" value=<?php
echo $bloodgroup; ?>" required>
            </div>
            <div class="form-group">
                <label>Email</label>
                <input class="form-control" name="email" value=<?php echo
$email; ?>" required>
            </div>
            <div class="form-group">
                <label>Address</label>
                <input class="form-control" name="address" value=<?php echo
$address; ?>" required>
            </div>
            <div class="form-group">
                <label>Contact</label>
                <input class="form-control" name="contact" value=<?php echo
$contact; ?>" required>
            </div>
            <input type="hidden" name="id" value=<?php echo $id; ?>">
            <button type="submit" class="btn btn-primary">Update</button>
        </form>
    </div>
</div>
</div>
</div>
</div>
</div>

```

```

</div>
<script src="../vendor/jquery/jquery.min.js"></script>
<script src="../vendor/bootstrap/js/bootstrap.min.js"></script>
<script src="../vendor/metisMenu/metisMenu.min.js"></script>
<script src="../dist/js/sb-admin-2.js"></script>
</body>

</html>

<?php
include 'dbconnect.php';

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $name = $_POST["name"];
    $guardiansname = $_POST["guardiansname"];
    $gender = $_POST["gender"];
    $dob = $_POST["dob"];
    $weight = $_POST["weight"];
    $bloodgroup = $_POST["bloodgroup"];
    $email = $_POST["email"];
    $address = $_POST["address"];
    $contact = $_POST["contact"];
    $id = $_POST['id'];

    $qry = "UPDATE donor SET name='$name', guardiansname='$guardiansname',
    gender='$gender', dob='$dob', weight='$weight', bloodgroup='$bloodgroup', email='$email',
    address='$address', contact='$contact' WHERE id='$id'";
    $result = mysqli_query($conn, $qry);

    if (!$result) {
        echo "ERROR: " . mysqli_error($conn);
    } else {
        echo "SUCCESSFULLY UPDATED";
    }
}
?>

```

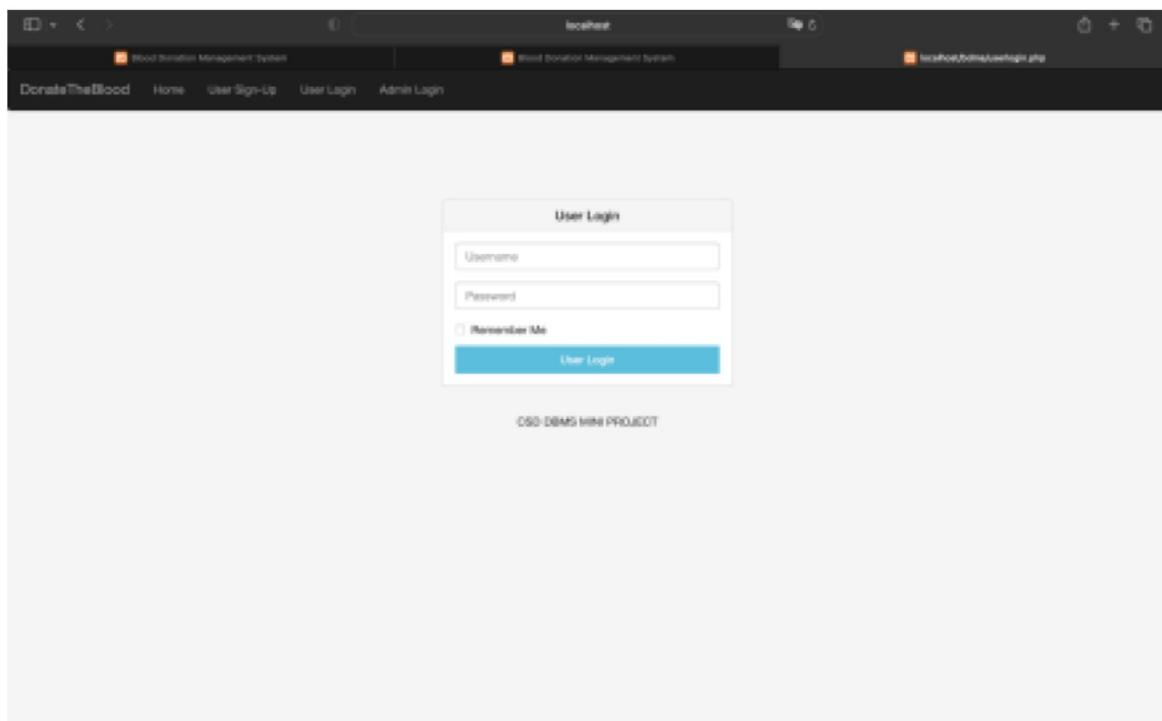
## **CHAPTER - 5** **SCREEN SHOTS**

**Fig 5.1 Introduction page**

The screenshot shows a web browser window with the URL `localhost`. The title bar says "DonateTheBlood". The main content area features a large banner with the text "Donate Blood to Save Lives!" and "Your drop of blood can build an ocean of happiness!". A green button labeled "Register as Donor" is visible. Below the banner is a graphic with a heart, a blood bag, and medical symbols.

The screenshot shows a web browser window with the URL `localhost/blood/usersignup.php`. The title bar says "Blood Donation Management System". The main content area has a red header "Register as a Donor!". It contains a form with fields for "Enter Full Name", "Enter Guardian's Name", "Gender [ M/F ]", "Enter Date Of Birth", "Enter Weight", "Enter Blood Group", "Enter Email Id", "Enter Address", and "Enter Contact Number". Each field has a placeholder text inside it.

**Fig 5.2 Donor Sign Up page**



**Fig 5.3 User Dashboard Login**

The screenshot shows a web browser window with a sidebar on the left containing links: 'View All Donors', 'Search Donors', 'View Announcements', and 'View Campaigns'. The main content area is titled 'Donors Detail' and displays a table of donor information. The table has 10 columns: Name, Username, Guardian's Name, Gender, D.O.B, Weight, Blood Group, Email, Address, and Contact. The table contains 6 rows of data.

Name	Username	Guardian's Name	Gender	D.O.B	Weight	Blood Group	Email	Address	Contact
Dhruv	demo	demo	M	2000-09-03	51	B+	demo@demo.com	demo	9820002500
Ratul	hamy	Demo	M	1988-06-17	70	B+	demo1@gmail.com	Demo Address	7854445420
Will Williams	williams	Peter R. Williams	M	1988-07-16	70	B+	williams@gmail.com	Demo Address	9248887540
John Doe	johed	Kevin Doe	M	1985-12-09	69	AB+	doejohn@gmail.com	905 Chandler Hollow	7854445470
Robert	robert	Simon L Berg	M	1984-06-21	82	AB-	robert@gmail.com	524 Duff Avenue	2547776452
Keerthana	Keerthana	Demo	F	2004-02-25	48	AB-	demo2@gmail.com	demoaddress	9840055004

**Fig 5.4 Donor details page**

The screenshot shows the 'Admin Login' page of a Blood Donor Management System. It features a header with three tabs: 'Blood Donor Management System' (localhost), 'Blood Donor Management System' (localhost), and 'localhost/AdminLogin.php'. The main content area contains an 'Admin Login' form with fields for 'Username' and 'Password', a 'Remember Me' checkbox, and a blue 'Login' button. Below the form is a small text: 'CSE DBMS MINI PROJECT'.

**Fig 5.5 Admin Dashboard**

The screenshot shows the 'Edit Blood Details' page of the Blood Donor Management System. The left sidebar includes links for 'Dashboard', 'Manage Blood Details' (with 'Add Blood', 'View Blood', 'Edit Blood', and 'Remove Blood' options), and 'Manage Donors'. The main content area displays a table titled 'Total Plasma of available bloods' with columns: Blood Group, Full Name, Gender, D.O.B, Weight, Address, Contact, Quantity, Collection Date, and Action (with edit and delete icons). The table lists 10 entries of blood donors with their details.

Total Plasma of available bloods								
Blood Group	Full Name	Gender	D.O.B	Weight	Address	Contact	Quantity	Collection Date
O+	Kishore	M	1990-05-05	89	demo address	8555555545	360	2016-05-08
AB+	Tarvi	M	1998-06-16	89	Dem Adr	78988877884	312	2020-12-08
AB-	Eshika	F	1990-03-12	59	San Andra	8555554585	310	2020-12-08
B+	Deyam	M	1996-02-02	80	Demo Address	7878787880	360	2020-12-08
B-	Harish	M	1997-01-05	70	Demo	8511118455	310	2020-12-08
B+	Tharun	M	1993-03-03	79	CA	8547778880	312	2020-12-07
O+	Sai	M	1990-12-04	89	Demo	8545554780	310	2020-12-07
O-	Eswatha	F	1995-06-15	75	Demo Address	7454447700	311	2021-01-08
A-	Loithika G	F	2004-06-16	49	demoad	8860008880	310	2024-11-12

Total Patients of available donors										
Name	Username	Guardian's Name	Gender	D.O.B	Weight	Blood Group	Email	Address	Contact	
Dhirus	demo	demo	M	2020-09-03	51	b+	demo@demo.com	demo	6520802500	
Rishul	Harry	Demo	M	1988-08-11	70	B+	demo1@gmail.com	Demo Address	1860445423	
Will Williams	williams	Ruth R Williams	M	1990-07-10	70	B+	williams@gmail.com	Demo Address	0245667543	
John Doe	johnd	Kevin Doe	M	1991-12-09	69	AB+	doejohnd@gmail.com	989-Chandler Holler	1860445473	
Robert	robert	Simon L Berg	M	1994-06-21	82	AB-	robert@gmail.com	524 Daff Avenue	2547739452	
Keerthana	Keerthana	Demo	F	2004-02-25	48	AB-	demo2@gmail.com	demodad	9840201004	

## CHAPTER 6

### CONCLUSION AND FUTURE ENHANCEMENT

The Blood Donation Management System (BDMS) simplifies donor registration and data management, ensuring seamless organization of blood donation processes. It provides an efficient platform for maintaining donor records and monitoring availability.

Future enhancements could include real-time donor updates, location-based donor searches, automated notifications, and predictive analytics for blood type demand. These features would further optimize the system, making it a comprehensive and indispensable tool for both administrators and donors.

## CHAPTER – 7

### REFERENCES

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