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CHAPTER 1

BLOOD BANK MANAGEMENT SYSTEM

1.1 INTRODUCTION

The 'Blood Bank Management System' allows us to keep track of quality of blood and also keeps track of available blood when requested by the acceptor. The blood bank management system is a crucial tool for maintaining the inventory of blood donations and blood samples. In this paper, we propose the design and implementation of a blood bank management system using a Database Management System (DBMS).

We regularly hear incidents of people requiring urgent medical care due to severe injuries or diseases, or due to surgeries. One important aspect of medical care is blood transfusion.

1.2 PROBLEM DEFINITION

The Blood Bank Management System aims to automate and streamline the process of managing blood donations, inventory, and distribution in a blood bank or blood donation center. The system will facilitate efficient tracking of blood donations, storage, and distribution to hospitals and patients in need. At the present there is no software to keep any records in blood bank. It becomes difficult to provide any record immediately at times of emergency. Required more human efforts in maintaining the branch related information. Manually to keep the accounts is also tedious & risky job & to maintain those accounts in ledgers for a long period is also very difficult. Difficult to manage and maintain the files. Chance of damage of files, if the data is stored in the files for duration of time. Privacy is difficult, Time consuming is retrieving, storing and updating the data. It is difficult to keep track the record about the donor & receiver he has donated or received the blood at the last time.

1.3 OBJECTIVES

1.Efficient Blood Donation Management

2.Inventory Management

3.Blood Donation Scheduling

4.Donor Screening and Eligibility

1.4 NEED

1. **Ensuring Blood Efficiency**: A Blood Management System helps to ensure an adequate supply of blood units by facilitating blood donations, tracking inventory levels, and managing blood donations, to hospitals and medical facilities.
2. **Improving Blood Safety and Quality**: Blood needs to maintain strict standards for blood screening, testing, and storage to ensure safety and quality of blood units.
3. **Enhancing Donor Management**: Managing blood donors effectively is essential for sustaining a safety of blood. A Blood Management System facilitates donor registration, appointment scheduling, communication ,making it easier to recruit and retain donors.
4. **Optimizing Inventory Management**: Blood needs to manage their blood inventory efficiently to minimize wastage, prevent shortages, and ensure the timely utilization of blood units before expiration.

1.5 ADVANTAGES AND DISADVANTAGES

- **ADVANTAGES**

1. Helps Blood Banks to automate blood donor and depository.
2. Encourages blood donors to donate.
3. Helps people find blood donors to times of need.

- **DISADVANTAGES**

One potential disadvantages of blood bank management system could be the initial cost implementation ,including software development ,hardware ,and staff training.

CHAPTER 2

REQUIREMENTS

2.1 SOFTWARE REQUIREMENTS

A set of programs associated with the operations of a computer is called software. Software is the part of the computer system which enables the user to interact with several physical hardware devices.

1. Operating System: Windows 11
2. Scripting Language: Java script
3. Back-End: MYSQL
4. Front-End: FLASK, HTML5 and CSS3
5. Type: Web Application
6. Server: Werkzeug

MYSQL:

It allows manipulation and organization of data in the Customer's database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.

FLASK:

Flask is a lightweight and extensible web framework for Python. It simplifies the process of building web applications by providing essential tools and libraries for routing, templating, and handling HTTP requests. With a minimalistic design, Flask allows developers to choose and integrate additional components as needed, making it versatile for a wide range of web development projects.

HTML:

Hypertext Markup Language- it is a language used to makeup web pages. It helps in holding everything together. Although HTLM was used for the implementation of the CRS, it is highly portable between different browsers and platforms with little or no alterations in code.

CSS (Cascading Style Sheet):

CSS is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document. One of the favored features is its ability to allow the sorting of document content written in markup languages (like HTML) from document presentation written in CSS.

2.1 HARDWARE REQUIREMENTS

Computer Processor: Core i5

Processor Speed: 3 GHz

Processor Hard Disk: 150 GB

RAM: 8 GB

CHAPTER 3

ENTITY RELATIONSHIP DIAGRAM

An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system. ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education, and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships, and their attributes.

3.1 USES OF ENTITY RELATIONSHIP DIAGRAMS

1. Database design
2. Database troubleshooting
3. Business information systems
4. Business process re-engineering (BPR)
5. Education
6. Research

3.2 COMPONENTS AND FEATURES OF ER DIAGRAM

An Entity-Relationship (ER) diagram is a graphical representation of entities and their relationships to each other. There are several components of an ER diagram that are used to represent the different elements of a database design. These components include:

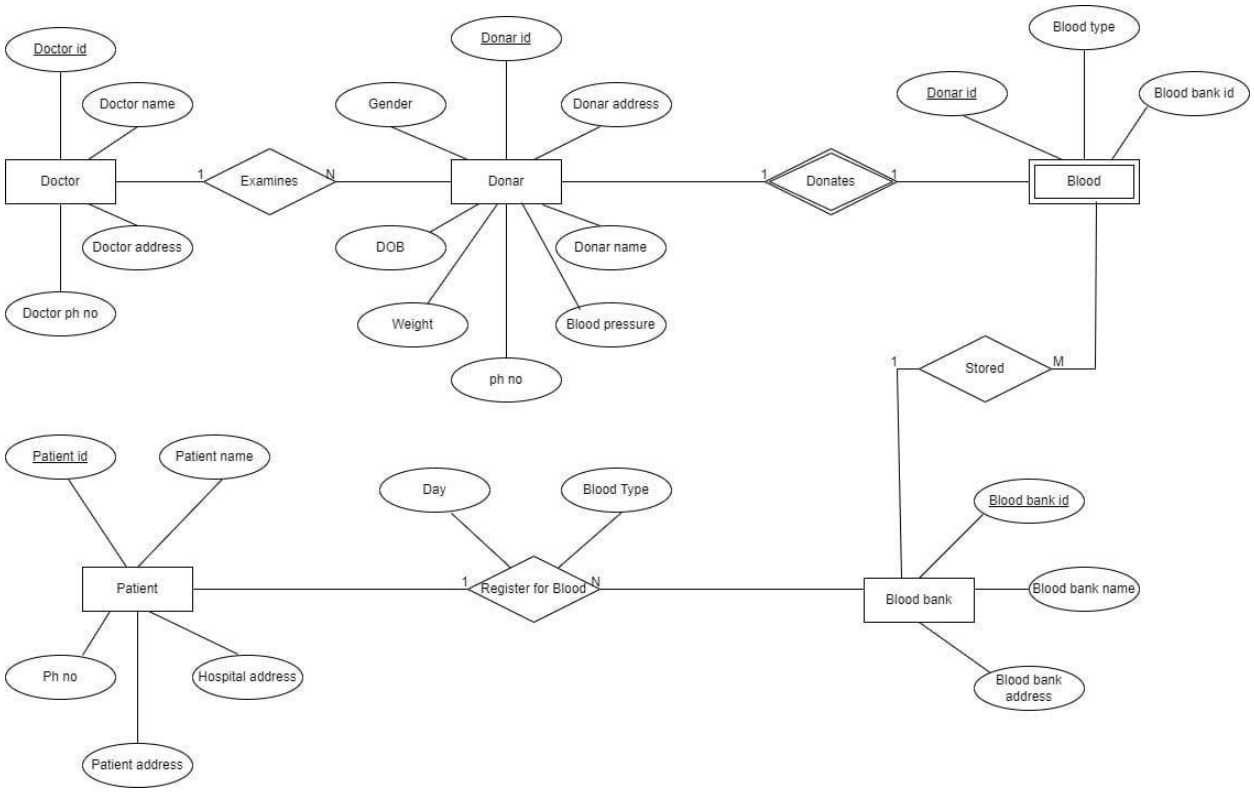
1. **Entities**: Represented by rectangles, entities are the objects or concepts that are stored in a database, such as customers, products, or orders.
2. **Attributes**: Represented by ovals, attributes are the characteristics or properties of an entity, such as a customer's name, address, or phone number.
3. **Relationships**: Represented by diamonds, relationships show how entities are related to one another, such as a customer placing an order for a product.
4. **Cardinality**: Represented by lines and numbers, cardinality defines the number of occurrences of one entity for a single occurrence of the related entity. There are three types of cardinalities:

a) One-to-one (1:1): An entity in set A can be associated with any number (zero or more) of entities in set B.
b) Many-to-one(N:1): An entity in set A can be associated with at most one entity in set B.
c) Many-to-many(M:N): An entity in set A can be associated with any number (zero or more) of entities in set B.

5. **Primary keys and foreign keys**: Represented by a key symbol, these are the unique identifiers for an entity and the attributes that link two entities in a relationship, respectively.
6. **Candidate key**: A minimal super key, meaning it has the least possible number of attributes to still be a super key. An entity set may have more than one candidate key.
7. **Connectivity**: Represented by arrows, connectivity shows the direction of the relationship between entities.
8. **Cardinality views:** Cardinality can be shown as look-across or same-side, depending on where the symbols are shown.
9. **Cardinality constraints**: The minimum or maximum numbers that apply to a relationship.

In summary, an ER diagram is a graphical representation of a database design that uses rectangles, ovals, diamonds, lines and numbers, key symbols and arrows to represent entities, attributes, relationships, cardinality, primary and foreign keys, and connectivity. These components together help to visually represent the structure and relationships of the data in a database.

3.3 ER DIAGRAM



CHAPTER 4

SCHEMA DIAGRAM

A database schema is considered the "**blueprint**" of a database which describes how the data may relate to other tables or other data models. However, the schema does not actually contain data. A sample of data from a database at a single moment in time is known as a database instance.

A schema diagram is a diagram which contains entities that will define that schema. A schema diagram only shows us the database design. It does not show the actual data of the database. Schema can be a single table or it can have more than one table which is related, it helps in referencing foreign keys for easy understanding.

4.1 KEY BENEFITS OF SCHEMA DIAGRAM

1. **Access and security:**

   Database schema design helps organize data into separate entities, making it easier to share a single schema within another database. Administrators can also control access through database permissions, adding another layer of security for more proprietary data

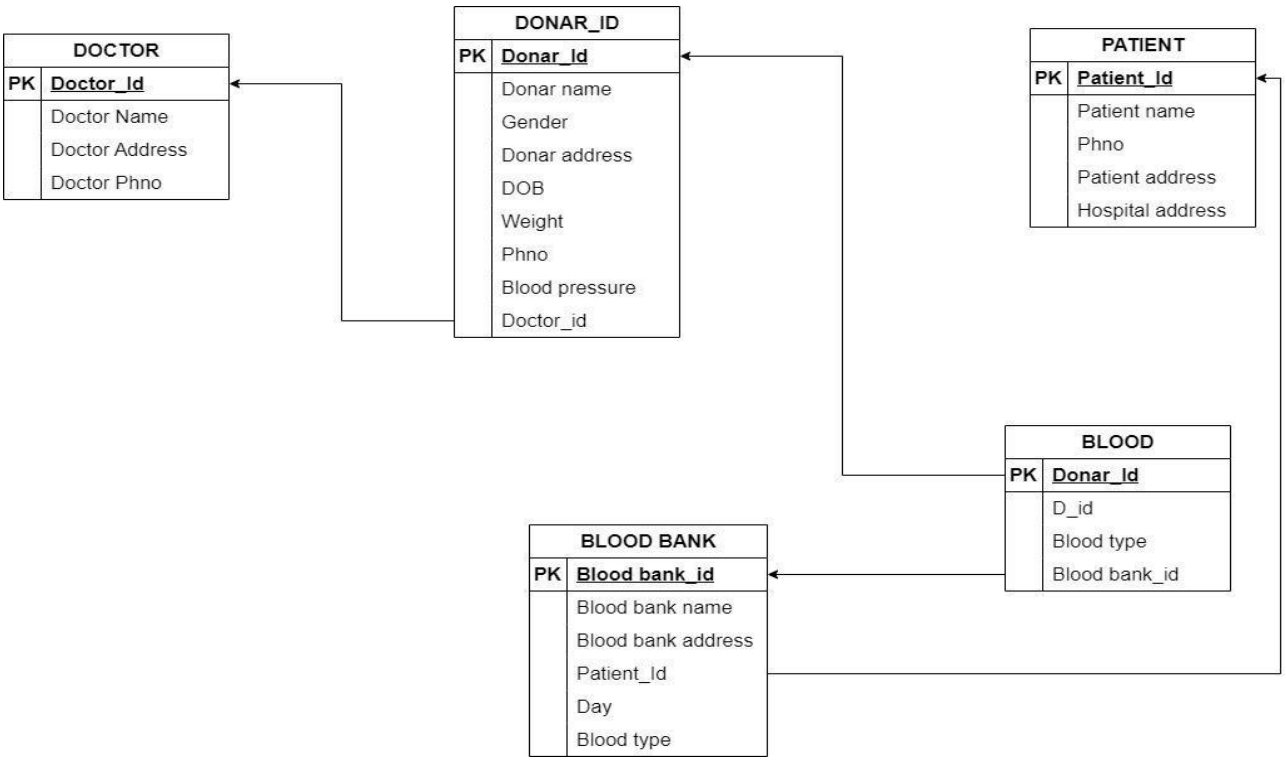
2. **Organization and communication:**

   Documentation of database schemas allow for more organization and better communication among internal stakeholders. Since it provides a common source of truth,it enables users to understand the logical constraints and methods of aggregation across tables.

3. **Integrity:**

   This organization and communication also help to ensure data validity. For example, it can help administrators manage normalization processes to avoid data duplication. It can also assist in monitoring compliance of the constraints in the schema's database design, enabling adherence to ACID properties (atomicity, consistency, isolation, durability).

4.2 SCHEMA DIAGRAM



CHAPTER 5

IMPLEMENTATION

5.1 BACKEND IMPLEMENTATION

App.py:

```
from flask import Flask, render_template, request, redirect, url_for
import mysql.connector

app = Flask(__name__)

# Configure MySQL
mydb = mysql.connector.connect(
    host="localhost",
    user="root",
    password="Rohan_123",
    database="blood_donation_db",
    auth_plugin='mysql_native_password'
)

# Create a cursor
cur = mydb.cursor()

# Create tables if they don't exist
cur.execute('''CREATE TABLE IF NOT EXISTS blood_bank (
        blood_bank_id INT AUTO_INCREMENT PRIMARY KEY,
        blood_bank_name VARCHAR(255),
        blood_bank_address VARCHAR(255)
    )''')

cur.execute('''CREATE TABLE IF NOT EXISTS doctor (
        doctor_id INT AUTO_INCREMENT PRIMARY KEY,
        doctor_name VARCHAR(255) NOT NULL,
        doctor_address VARCHAR(255),
```

```
  phone_number VARCHAR(15)
    )'')

cur.execute(''CREATE TABLE IF NOT EXISTS donor (
        donor_id INT AUTO_INCREMENT PRIMARY KEY,
        gender ENUM('Male', 'Female', 'Other') NOT NULL,
        donor_address VARCHAR(255),
        dob DATE,
        weight FLOAT,
        phno VARCHAR(15),
        blood_pressure VARCHAR(20),
        donor_name VARCHAR(255)
    )'')

cur.execute(''CREATE TABLE IF NOT EXISTS blood (
        blood_type VARCHAR(10),
        donor_id INT,
        blood_bank_id INT,
        FOREIGN KEY (donor_id) REFERENCES donor(donor_id),
        FOREIGN KEY (blood_bank_id) REFERENCES blood_bank(blood_bank_id)
    )'')

cur.execute(''CREATE TABLE IF NOT EXISTS patient (
        patient_id INT AUTO_INCREMENT PRIMARY KEY,
        patient_name VARCHAR(255),
        phno VARCHAR(15),
        patient_address VARCHAR(255),
        hospital_address VARCHAR(255)
    )'')

# Close cursor
cur.close()
```

```
#Routes

@app.route('/')

def index():
    return render_template('index.html')

@app.route('/add_doctor', methods=['POST'])
def add_doctor():
    if request.method == 'POST':
        doctor_name = request.form['doctor_name']
        doctor_address = request.form['doctor_address']
        phone_number = request.form['phone_number']

        cur = mydb.cursor()
        cur.execute("INSERT INTO doctor (doctor_name, doctor_address, phone_number)
VALUES (%s, %s, %s)", (doctor_name, doctor_address, phone_number))
        mydb.commit()
        cur.close()

        return redirect(url_for('index'))

@app.route('/add_donor', methods=['POST'])
def add_donor():
    if request.method == 'POST':
        gender = request.form['gender']
        donor_address = request.form['donor_address']
        dob = request.form['dob']
        weight = request.form['weight']
        phno = request.form['phno']
        blood_pressure = request.form['blood_pressure']
        donor_name = request.form['donor_name']

        cur = mydb.cursor()
```

```
cur.execute("INSERT INTO donor (gender, donor_address, dob, weight, phno, blood_pressure, donor_name) VALUES (%s, %s, %s, %s, %s, %s, %s)", (gender, donor_address, dob, weight, phno, blood_pressure, donor_name))

        mydb.commit()
        cur.close()


        return redirect(url_for('index'))


@app.route('/add_blood', methods=['POST'])
def add_blood():
    if request.method == 'POST':
        blood_type = request.form['blood_type']
        donor_id = request.form['donor_id']
        blood_bank_id = request.form['blood_bank_id']


        cur = mydb.cursor()
        cur.execute("INSERT INTO blood (blood_type, donor_id, blood_bank_id) VALUES (%s, %s, %s)", (blood_type, donor_id, blood_bank_id))
        mydb.commit()
        cur.close()

        return redirect(url_for('index'))



@app.route('/add_blood_bank', methods=['POST'])
def add_blood_bank():
    if request.method == 'POST':
        blood_bank_name = request.form['blood_bank_name']
        blood_bank_address = request.form['blood_bank_address']


        cur = mydb.cursor()
        cur.execute("INSERT INTO blood_bank (blood_bank_name, blood_bank_address) VALUES (%s, %s)", (blood_bank_name, blood_bank_address))
        mydb.commit()
```

```
cur.close()

 return redirect(url_for('index'))
@app.route('/add_patient', methods=['POST'])
def add_patient():
    if request.method == 'POST':
        patient_name = request.form['patient_name']
        phno = request.form['phno']
        patient_address = request.form['patient_address']
        hospital_address = request.form['hospital_address']

        cur = mydb.cursor()
        cur.execute("INSERT INTO patient (patient_name, phno, patient_address, hospital_address)
VALUES (%s, %s, %s, %s)", (patient_name, phno, patient_address, hospital_address))
        mydb.commit()
        cur.close()

        return redirect(url_for('index'))

 # Function to get data from tables
def get_data(table):
    cur = mydb.cursor(dictionary=True)
    cur.execute(f"SELECT * FROM {table}")
    data = cur.fetchall()
    cur.close()
    return data

# Function to add data to tables
def add_data(table, data):
    cur = mydb.cursor()
    placeholders = ', '.join(['%s'] * len(data))
    columns = ', '.join(data.keys())
    values = tuple(data.values())
    cur.execute(f"INSERT INTO {table} ({columns}) VALUES ({placeholders})", values)
```

```
  mydb.commit()
    cur.close()
@app.route('/view_doctors')
def view_doctors():
    data = get_data('doctor')
    return render_template('view_doctors.html', doctors=data)

@app.route('/view_donors')
def view_donors():
    data = get_data('donor')
    return render_template('view_donors.html', donors=data)

@app.route('/view_blood_banks')
def view_blood_banks():
    data = get_data('blood_bank')
    return render_template('view_blood_banks.html', blood_banks=data)

@app.route('/view_patients')
def view_patients():
    data = get_data('patient')
    return render_template('view_patients.html', patients=data)

@app.route('/view_blood')
def view_blood():
    data = get_data('blood')
    return render_template('view_blood.html', blood=data)

# Routes for deleting and updating entities
@app.route('/delete_doctor/<int:doctor_id>', methods=['POST'])
def delete_doctor(doctor_id):
    cur = mydb.cursor()
    cur.execute("DELETE FROM doctor WHERE doctor_id = %s", (doctor_id,))
    mydb.commit()
```

```
cur.close()
  return redirect(url_for('view_doctors'))

@app.route('/update_doctor/<int:doctor_id>', methods=['GET', 'POST'])
def update_doctor(doctor_id):
    cur = mydb.cursor(dictionary=True)
    if request.method == 'POST':
        # Fetch data from the form
        doctor_name = request.form['doctor_name']
        doctor_address = request.form['doctor_address']
        phone_number = request.form['phone_number']

        # Update the doctor details in the database
        cur.execute("UPDATE doctor SET doctor_name = %s, doctor_address = %s, phone_number
= %s WHERE doctor_id = %s",
                    (doctor_name, doctor_address, phone_number, doctor_id))
        mydb.commit()
        cur.close()
        return redirect(url_for('view_doctors'))
    else:
        # Fetch existing details of the doctor
        cur.execute("SELECT * FROM doctor WHERE doctor_id = %s", (doctor_id,))
        doctor = cur.fetchone()
        cur.close()
        return render_template('update_doctor.html', doctor=doctor)

# Similar routes for donors, blood banks, and patients
@app.route('/delete_donor/<int:donor_id>', methods=['POST'])
def delete_donor(donor_id):
    cur = mydb.cursor()
    cur.execute("DELETE FROM donor WHERE donor_id = %s", (donor_id,))
    mydb.commit()
    cur.close()
```

```
 return redirect(url_for('view_donors'))

@app.route('/delete_patient/<int:patient_id>', methods=['POST'])
def delete_patient(patient_id):
    cur = mydb.cursor()
    cur.execute("DELETE FROM patient WHERE patient_id = %s", (patient_id,))
    mydb.commit()
    cur.close()
    return redirect(url_for('view_patients'))



@app.route('/update_donor/<int:donor_id>', methods=['GET', 'POST'])
def update_donor(donor_id):
    cur = mydb.cursor(dictionary=True)
    if request.method == 'POST':
        # Fetch data from the form
        gender = request.form['gender']
        donor_address = request.form['donor_address']
        dob = request.form['dob']
        weight = request.form['weight']
        phno = request.form['phno']
        blood_pressure = request.form['blood_pressure']
        donor_name = request.form['donor_name']

        # Update the donor details in the database
        cur.execute("UPDATE donor SET gender = %s, donor_address = %s, dob = %s, weight =
%s, phno = %s, blood_pressure = %s, donor_name = %s WHERE donor_id = %s",
                    (gender, donor_address, dob, weight, phno, blood_pressure, donor_name, donor_id))
        mydb.commit()
        cur.close()
        return redirect(url_for('view_donors'))
    else
```

```
 # Fetch existing details of the donor
        cur.execute("SELECT * FROM donor WHERE donor_id = %s", (donor_id,))
        donor = cur.fetchone()
        cur.close()
        return render_template('update_donor.html', donor=donor)

@app.route('/update_patient/<int:patient_id>', methods=['GET', 'POST'])
def update_patient(patient_id):
    cur = mydb.cursor(dictionary=True)
    if request.method == 'POST':
        # Fetch data from the form
        patient_name = request.form['patient_name']
        phno = request.form['phno']
        patient_address = request.form['patient_address']
        hospital_address = request.form['hospital_address']

        # Update the patient details in the database
        cur.execute("UPDATE patient SET patient_name = %s, phno = %s, patient_address = %s,
hospital_address = %s WHERE patient_id = %s",
                    (patient_name, phno, patient_address, hospital_address, patient_id))
        mydb.commit()
        cur.close()
        return redirect(url_for('view_patients'))
    else:
        # Fetch existing details of the patient
        cur.execute("SELECT * FROM patient WHERE patient_id = %s", (patient_id,))
        patient = cur.fetchone()
        cur.close()
        return render_template('update_patient.html', patient=patient, patient_id=patient_id)

@app.route('/update_blood_bank/<int:blood_bank_id>', methods=['GET', 'POST'])
def update_blood_bank(blood_bank_id):
    cur = mydb.cursor(dictionary=True
```

```
if request.method == 'POST':
        # Fetch data from the form
        blood_bank_name = request.form['blood_bank_name']
        blood_bank_address = request.form['blood_bank_address']

        # Update the blood bank details in the database
        cur.execute("UPDATE blood_bank SET blood_bank_name = %s, blood_bank_address = %s
WHERE blood_bank_id = %s",
                    (blood_bank_name, blood_bank_address, blood_bank_id))
        mydb.commit()
        cur.close()
        return redirect(url_for('view_blood_banks'))
    else:
        # Fetch existing details of the blood bank
        cur.execute("SELECT * FROM blood_bank WHERE blood_bank_id = %s",
(blood_bank_id,))
        blood_bank = cur.fetchone()
        cur.close()
        return render_template('update_blood_bank.html', blood_bank=blood_bank,
blood_bank_id=blood_bank_id)

@app.route('/search_patients', methods=['GET', 'POST'])
def search_patients():
    if request.method == 'POST':
        search_term = request.form['search_term']
        cur = mydb.cursor(dictionary=True)
        cur.execute("SELECT * FROM patient WHERE patient_name LIKE %s OR phno LIKE %s
OR patient_address LIKE %s OR hospital_address LIKE %s",
                    ('%' + search_term + '%', '%' + search_term + '%', '%' + search_term + '%', '%' +
search_term + '%'))
        patients = cur.fetchall()
        cur.close()
        return render_template('search_results_patients.html', patients=patients
```

```
    return render_template('search_patients.html')

# Similar routes for searching doctors, donors, and blood banks
@app.route('/search_doctors', methods=['GET', 'POST'])
def search_doctors():
    if request.method == 'POST':
        # Handle search functionality
        doctor_name = request.form['doctor_name']
        cur = mydb.cursor(dictionary=True)
        cur.execute("SELECT * FROM doctor WHERE doctor_name LIKE %s", ('%' +
doctor_name + '%',))
        doctors = cur.fetchall()
        cur.close()
        return render_template('search_doctors.html', doctors=doctors)
    else:
        return render_template('search_doctors.html')

@app.route('/search_donors', methods=['GET', 'POST'])
def search_donors():
    if request.method == 'POST':
        # Handle search functionality
        donor_name = request.form['donor_name']
        cur = mydb.cursor(dictionary=True)
        cur.execute("SELECT * FROM donor WHERE donor_name LIKE %s", ('%' + donor_name
+ '%',))
        donors = cur.fetchall()
        cur.close()
        return render_template('search_donors.html', donors=donors)
    else:
        return render_template('search_donors.html')

@app.route('/search_blood_banks', methods=['GET', 'POST'])
def search_blood_banks():
```

```
 if request.method == 'POST':
        # Handle search functionality
        blood_bank_name = request.form['blood_bank_name']
        cur = mydb.cursor(dictionary=True)
        cur.execute("SELECT * FROM blood_bank WHERE blood_bank_name LIKE %s", ('%' +
blood_bank_name + '%',))
        blood_banks = cur.fetchall()
        cur.close()
        return render_template('search_blood_banks.html', blood_banks=blood_banks)
    else:
        return render_template('search_blood_banks.html')
if__name__== '__main__
 app.run(debug=True)
```

5.2 FRONTEND IMPLEMENTATION

Index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Blood Bank Management System</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        h2 {
            color: #2980b9;
            margin-top: 40px;
        }
        form {
            background-color: #fff;
            padding: 20px;
            border-radius: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            margin-bottom: 20px;
        }
        input[type="text"], input[type="date"]
```

```
width: calc(100% - 42px);
        padding: 10px;
        margin-bottom: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
    }
    button[type="submit"] {
        background-color: #2980b9;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
    }
    button[type="submit"]:hover {
        background-color: #1e6aaa;
    }
    ul {
        list-style-type: none;
        padding: 0;
        margin: 0;
        display: flex;
        justify-content: center;
    }
    ul li {
        margin-right: 10px;
    }
    ul li:last-child {
        margin-right: 0;
    }
    ul li form {
        display: inline-block
```

```
    }
    </style>
</head>
<body>
    <h1>Hospital Blood Donation System</h1>

    <!-- Form to add a doctor -->
    <div>
        <h2>Add Doctor</h2>
        <form action="/add_doctor" method="POST">
            <input type="text" name="doctor_name" placeholder="Doctor Name" required><br>
            <input type="text" name="doctor_address" placeholder="Doctor Address" required><br>
            <input type="text" name="phone_number" placeholder="Phone Number" required><br>
            <button type="submit">Add Doctor</button>
        </form>
    </div>

    <!-- Form to add a donor -->
    <div>
        <h2>Add Donor</h2>
        <form action="/add_donor" method="POST">
            <input type="text" name="gender" placeholder="Gender" required><br>
            <input type="text" name="donor_address" placeholder="Donor Address" required><br>
            <input type="date" name="dob" placeholder="Date of Birth" required><br>
            <input type="text" name="weight" placeholder="Weight" required><br>
            <input type="text" name="phno" placeholder="Phone Number" required><br>
            <input type="text" name="blood_pressure" placeholder="Blood Pressure" required><br>
            <input type="text" name="donor_name" placeholder="Donor Name" required><br>
            <button type="submit">Add Donor</button>
        </form>
    </div>

    <!-- Form to add a patient -->
```

```
<div>
    <h2>Add Patient</h2>
    <form action="/add_patient" method="POST">
        <input type="text" name="patient_name" placeholder="Patient Name" required><br>
        <input type="text" name="phno" placeholder="Phone Number" required><br>
        <input type="text" name="patient_address" placeholder="Patient Address" required><br>
        <input type="text" name="hospital_address" placeholder="Hospital Address"
required><br>
        <button type="submit">Add Patient</button>
    </form>
</div>

<!-- Form to add a blood bank -->
<div>
    <h2>Add Blood Bank</h2>
    <form action="/add_blood_bank" method="POST">
        <input type="text" name="blood_bank_name" placeholder="Blood Bank Name"
required><br>
        <input type="text" name="blood_bank_address" placeholder="Blood Bank Address"
required><br>
        <button type="submit">Add Blood Bank</button>
    </form>
</div>

<!-- Form to add blood -->
<div>
    <h2>Add Blood</h2>
    <form action="/add_blood" method="POST">
        <input type="text" name="blood_type" placeholder="Blood Type" required><br>
        <input type="text" name="donor_id" placeholder="Donor ID" required><br>
        <input type="text" name="blood_bank_id" placeholder="Blood Bank ID" required><br>
        <button type="submit">Add Blood</button>
    </form>
```

```
</div>
<!-- Buttons to view doctors, donors, blood banks, patients, and blood -->
  <h2>View Data</h2>
  <ul>
    <li><form action="/view_doctors"><button type="submit">View
Doctors</button></form></li>
    <li><form action="/view_donors"><button type="submit">View
Donors</button></form></li>
    <li><form action="/view_blood_banks"><button type="submit">View Blood
Banks</button></form></li>
    <li><form action="/view_patients"><button type="submit">View
Patients</button></form></li>
    <li><form action="/view_blood"><button type="submit">View
Blood</button></form></li>
  </ul>

</body>
</html>
```

Search Blood_bank.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Search Blood Banks</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f3f3f3;
      margin: 0;
      padding: 20px;
```

```
h1 {
        color: #c0392b;
        text-align: center;
        margin-bottom: 20px;
    }
    form {
        background-color: #fff;
        padding: 20px;
        border-radius: 5px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        width: 300px;
        margin: 0 auto;
    }
    form label {
        display: block;
        margin-bottom: 10px;
        color: #2980b9;
    }
    form input[type="text"] {
        width: calc(100% - 42px);
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        margin-bottom: 10px;
    }
    form button[type="submit"] {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
```

```
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
        h2 {
            color: #2980b9;
            margin-top: 40px;
        }
        ul {
            list-style-type: none;
            padding: 0;
            margin: 0;
        }
        ul li {
            background-color: #fff;
            padding: 10px 20px;
            border-radius: 5px;
            margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <h1>Search Blood Banks</h1>

    <!-- Display search results here -->
    <div>
        <h2>Search Results</h2>
        <ul>
            {% for blood_bank in blood_banks %}
            <li>{{ blood_bank.blood_bank_name }} - {{ blood_bank.blood_bank_address }}</li>
            {% endfor %}
        </ul>
    </div>
```

```
</body>
```

</html>Search_doctors.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Search Doctors</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        form {
            background-color: #fff;
            padding: 20px;
            border-radius: 5px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            width: 300px;
            margin: 0 auto;
        }
        form label {
            display: block;
            margin-bottom: 10px;
            color: #2980b9;
```

```
}
    form input[type="text"] {
        width: calc(100% - 42px);
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        margin-bottom: 10px;
    }
    form button[type="submit"] {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
    }
    form button[type="submit"]:hover {
        background-color: #2980b9;
    }
    h2 {
        color: #2980b9;
        margin-top: 40px;
    }
    ul {
        list-style-type: none;
        padding: 0;
        margin: 0;
    }
    ul li {
        background-color: #fff;
        padding: 10px 20px;
        border-radius: 5px;
```

```
margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <h1>Search Doctors</h1>

    <!-- Display search results here -->
    <div>
        <h2>Search Results</h2>
        <ul>
            {% for doctor in doctors %}
            <li>{{ doctor.doctor_name }} - {{ doctor.doctor_address }} - {{ doctor.phone_number
}}</li>
            {% endfor %}
        </ul>
    </div>
</body>
</html>
```

Search_donors.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Search Donors</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0
```

```
padding: 20px;
    }
    h1 {
        color: #c0392b;
        text-align: center;
        margin-bottom: 20px;
    }
    form {
        background-color: #fff;
        padding: 20px;
        border-radius: 5px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        width: 300px;
        margin: 0 auto;
    }
    form label {
        display: block;
        margin-bottom: 10px;
        color: #2980b9;
    }
    form input[type="text"] {
        width: calc(100% - 42px);
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        margin-bottom: 10px;
    }
    form button[type="submit"] {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
```

```
cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
        h2 {
            color: #2980b9;
            margin-top: 40px;
        }
        ul {
            list-style-type: none;
            padding: 0;
            margin: 0;
        }
        ul li {
            background-color: #fff;
            padding: 10px 20px;
            border-radius: 5px;
            margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <h1>Search Donors</h1>


    <!-- Display search results here -->
    <div>
        <h2>Search Results</h2>
        <ul>
```

```
{% for donor in donors %}
        <li>{{ donor.donor_name }} - {{ donor.donor_address }} - {{ donor.phno }}</li>
        {% endfor %}
      </ul>
   </div>
</body>
</html>
```

Search_patients.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Search Patients</title>
   <style>
      body {
         font-family: Arial, sans-serif;
         background-color: #f3f3f3;
         margin: 0;
         padding: 20px;
      }
      h1 {
         color: #c0392b;
         text-align: center;
         margin-bottom: 20px;
      }
      form {
         background-color: #fff;
         padding: 20px;
         border-radius: 5px;
         box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
```

```
width: 300px;
            margin: 0 auto;
        }
        form input[type="text"] {
            width: calc(100% - 82px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Search Patients</h1>
    <form action="/search_patients" method="POST">
        <input type="text" name="search_term" placeholder="Enter search term" required>
        <button type="submit">Search</button>
    </form>
</body>
</html>
```

Search_results_patients.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Search Results - Patients</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        ul {
            list-style-type: none;
            padding: 0;
            margin: 0;
        }
        ul li {
            background-color: #fff;
            padding: 10px 20px;
            border-radius: 5px;
            margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
```

```
<body>
    <h1>Search Results - Patients</h1>
    <p>Search term: {{ search_term }}</p>
    <ul>
        {% for patient in patients %}
            <li>{{ patient.patient_name }} - {{ patient.phno }} - {{ patient.patient_address }} - {{
patient.hospital_address }}</li>
        {% endfor %}
    </ul>
</body>
</html>
```

update_blood_bank.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Update Blood Bank</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        form {
            background-color: #fff;
```

```
padding: 20px;
            border-radius: 5px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            width: 300px;
            margin: 0 auto;
        }
        form input[type="text"] {
            width: calc(100% - 42px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Update Blood Bank</h1>
    <form action="/update_blood_bank/{{ blood_bank_id }}" method="POST">
        <input type="text" name="blood_bank_name" placeholder="Blood Bank Name" value="{{
blood_bank.blood_bank_name }}" required><br>
```

```
  <input type="text" name="blood_bank_address" placeholder="Blood Bank Address" value="{{ blood_bank.blood_bank_address }}" required><br>
      <button type="submit">Update Blood Bank</button>
   </form>
</body>
</html>
```

Update_doctor.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>Update Doctor</title>
   <style>
      body {
         font-family: Arial, sans-serif;
         background-color: #f3f3f3;
         margin: 0;
         padding: 20px;
      }
      h1 {
         color: #c0392b;
         text-align: center;
         margin-bottom: 20px;
      }
      form {
         background-color: #fff;
         padding: 20px;
         border-radius: 5px;
         box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
         width: 300px;
         margin: 0 auto;
```

```
    }
        form label {
            display: block;
            margin-bottom: 5px;
        }
        form input[type="text"] {
            width: calc(100% - 42px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Update Doctor</h1>
    <form action="/update_doctor/{{ doctor.doctor_id }}" method="POST">
        <label for="doctor_name">Doctor Name:</label>
        <input type="text" id="doctor_name" name="doctor_name" value="{{ doctor.doctor_name
}}" required><br>
```

```
<label for="doctor_address">Doctor Address:</label>
        <input type="text" id="doctor_address" name="doctor_address" value="{{
doctor.doctor_address }}" required><br>

        <label for="phone_number">Phone Number:</label>
        <input type="text" id="phone_number" name="phone_number" value="{{
doctor.phone_number }}" required><br>

        <button type="submit">Update Doctor</button>
    </form>
</body>
</html>
```

Update_donor.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Update Donor</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
```

```
h1 {
        color: #c0392b;
        text-align: center;
        margin-bottom: 20px;
    }
    form {
        background-color: #fff;
        padding: 20px;
        border-radius: 5px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        width: 300px;
        margin: 0 auto;
    }
    form label {
        display: block;
        margin-bottom: 5px;
    }
    form input[type="text"],
    form input[type="date"] {
        width: calc(100% - 42px);
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
```

```
 margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Update Donor</h1>
    <form action="/update_donor/{{ donor.donor_id }}" method="POST">
        <label for="gender">Gender:</label>
        <input type="text" id="gender" name="gender" value="{{ donor.gender }}" required><br>
```

```
<label for="donor_address">Donor Address:</label>

    <input type="text" id="donor_address" name="donor_address" value="{{
donor.donor_address }}" required><br>


    <label for="dob">Date of Birth:</label>

    <input type="date" id="dob" name="dob" value="{{ donor.dob }}" required><br>


    <label for="weight">Weight:</label>

    <input type="text" id="weight" name="weight" value="{{ donor.weight }}" required><br>


    <label for="phno">Phone Number:</label>

    <input type="text" id="phno" name="phno" value="{{ donor.phno }}" required><br>


    <label for="blood_pressure">Blood Pressure:</label>

    <input type="text" id="blood_pressure" name="blood_pressure" value="{{
donor.blood_pressure }}" required><br>


    <label for="donor_name">Donor Name:</label>

    <input type="text" id="donor_name" name="donor_name" value="{{ donor.donor_name
}}" required><br>


    <button type="submit">Update Donor</button>

  </form>
```

```
</body>
```

</html>Update_patient.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Update Patient</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        form {
            background-color: #fff;
            padding: 20px;
```

```
border-radius: 5px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        width: 300px;
        margin: 0 auto;
    }
    form input[type="text"] {
        width: calc(100% - 42px);
        padding: 10px;
        border: 1px solid #ccc;
        border-radius: 5px;
        margin-bottom: 10px;
    }
    form button[type="submit"] {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
    }
    form button[type="submit"]:hover {
```

```
background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>Update Patient</h1>
    <form action="/update_patient/{{ patient_id }}" method="POST">
        <input type="text" name="patient_name" placeholder="Patient Name" value="{{ patient.patient_name }}" required><br>
        <input type="text" name="phno" placeholder="Phone Number" value="{{ patient.phno }}" required><br>
        <input type="text" name="patient_address" placeholder="Patient Address" value="{{ patient.patient_address }}" required><br>
        <input type="text" name="hospital_address" placeholder="Hospital Address" value="{{ patient.hospital_address }}" required><br>
        <button type="submit">Update Patient</button>
    </form>
</body>
</html>
```

View_bloodbank.html:

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

```
<meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>View Blood Banks</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        h2 {
            color: #2980b9;
            margin-top: 40px;
        }
        ul {
            list-style-type: none;
            padding: 0;
            margin: 0;
```

```
}
    ul li {
        background-color: #fff;
        padding: 10px 20px;
        border-radius: 5px;
        margin-bottom: 10px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    }
    ul li form {
        display: inline;
    }
    ul li form button[type="submit"] {
        background-color: #e74c3c;
        color: #fff;
        border: none;
        padding: 5px 10px;
        border-radius: 3px;
        cursor: pointer;
        margin-left: 10px;
    }
    ul li form button[type="submit"]:hover {
        background-color: #c0392b;
```

```
}
    ul li button.update-btn {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 5px 10px;
        border-radius: 3px;
        cursor: pointer;
        margin-left: 10px;
        text-decoration: none;
        display: inline-block;
    }
    ul li button.update-btn:hover {
        background-color: #2980b9;
    }
    ul li a {
        text-decoration: none;
        color: #3498db;
        margin-left: 10px;
    }
    ul li a:hover {
        text-decoration: underline;
```

```
}
        form input[type="text"] {
            width: calc(100% - 82px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
```

```
<body>
    <h1>View Blood Banks</h1>
    <ul>
        {% for blood_bank in blood_banks %}
            <li>
                {{ blood_bank.blood_bank_id }} - {{ blood_bank.blood_bank_name }} - {{ blood_bank.blood_bank_address }}
                <form action="/update_blood_bank/{{ blood_bank.blood_bank_id }}" method="GET">
                    <input type="hidden" name="blood_bank_id" value="{{ blood_bank.blood_bank_id }}">
                    <button class="update-btn" type="submit">Update</button>
                </form>
            </li>
        {% endfor %}
    </ul>

    <h2>Search Blood Banks</h2>
    <form action="/search_blood_banks" method="POST">
        <input type="text" name="blood_bank_name" placeholder="Enter blood bank name" required>
        <button type="submit">Search</button>
    </form>
```

```
</body>
</html>
```

View_blood.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>View Blood</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        ul {
            list-style-type: none;
```

```
padding: 0;
            margin: 0;
        }
        ul li {
            background-color: #fff;
            padding: 10px 20px;
            border-radius: 5px;
            margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
    </style>
</head>
<body>
    <h1>View Blood</h1>
    <ul>
        {% for blood_record in blood %}
            <li>
                Blood Type: {{ blood_record.blood_type }} | Donor ID: {{ blood_record.donor_id }} |
Blood Bank ID: {{ blood_record.blood_bank_id }}
            </li>
        {% endfor %}
    </ul>
</body>
```

```
</html>
```

View_doctors.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>View Doctors</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        h2 {
            color: #2980b9;
            margin-top: 40px;
```

```
}
ul {
    list-style-type: none;
    padding: 0;
    margin: 0;
}
ul li {
    background-color: #fff;
    padding: 10px 20px;
    border-radius: 5px;
    margin-bottom: 10px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}
ul li form {
    display: inline;
}
ul li form button[type="submit"] {
    background-color: #e74c3c;
    color: #fff;
    border: none;
    padding: 5px 10px;
    border-radius: 3px;
    cursor: pointer;
```

```
margin-left: 10px;
    }
    ul li form button[type="submit"]:hover {
        background-color: #c0392b;
    }
    ul li button.update-btn {
        background-color: #3498db;
        color: #fff;
        border: none;
        padding: 5px 10px;
        border-radius: 3px;
        cursor: pointer;
        margin-left: 10px;
        text-decoration: none;
        display: inline-block;
    }
    ul li button.update-btn:hover {
        background-color: #2980b9;
    }
    ul li a {
        text-decoration: none;
        color: #3498db;
```

```
margin-left: 10px;
 }
 ul li a:hover {
    text-decoration: underline;
 }
 form input[type="text"] {
    width: calc(100% - 82px);
    padding: 10px;
    border: 1px solid #ccc;
    border-radius: 5px;
    margin-bottom: 10px;
 }
 form button[type="submit"] {
    background-color: #3498db;
    color: #fff;
    border: none;
    padding: 10px 20px;
    border-radius: 5px;
    cursor: pointer;
    transition: background-color 0.3s ease;
 }
 form button[type="submit"]:hover {
```

```
background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>View Doctors</h1>
    <ul>
        {% for doctor in doctors %}
            <li>
                {{ doctor.doctor_id }} - {{ doctor.doctor_name }} - {{ doctor.doctor_address }} - {{ doctor.phone_number }}
                <form action="/delete_doctor/{{ doctor.doctor_id }}" method="POST">
                    <button type="submit">Delete</button>
                </form>
                <form action="/update_doctor/{{ doctor.doctor_id }}" method="GET">
                    <input type="hidden" name="doctor_id" value="{{ doctor.doctor_id }}">
                    <button class="update-btn" type="submit">Update</button>
                </form>
            </li>
        {% endfor %}
    </ul>

    <!-- Search Doctor Form -->
```

```
<h2>Search Doctors</h2>
    <form action="/search_doctors" method="POST">
        <input type="text" name="doctor_name" placeholder="Enter doctor name" required>
        <button type="submit">Search</button>
    </form>
</body>
</html>
```

View_donors.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>View Donors</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        h2 {
```

```
color: #2980b9;
            margin-top: 40px;
        }
        ul {
            list-style-type: none;
            padding: 0;
            margin: 0;
        }
        ul li {
            background-color: #fff;
            padding: 10px 20px;
            border-radius: 5px;
            margin-bottom: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        }
        ul li form {
            display: inline;
        }
        ul li form button[type="submit"] {
            background-color: #e74c3c;
            color: #fff;
            border: none;
            padding: 5px 10px;
            border-radius: 3px;
            cursor: pointer;
            margin-left: 10px;
        }
        ul li form button[type="submit"]:hover {
            background-color: #c0392b;
        }
        ul li form input[type="hidden"] {
            display: none;
```

```
form input[type="text"] {
            width: calc(100% - 82px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <h1>View Donors</h1>
    <ul>
        {% for donor in donors %}
            <li>
                {{ donor.donor_id }} - {{ donor.donor_name }} - {{ donor.donor_address }} - {{
donor.gender }} - {{ donor.dob }} - {{ donor.weight }} - {{ donor.phno }} - {{
donor.blood_pressure }}
                <form action="/update_donor/{{ donor.donor_id }}" method="GET">
                    <input type="hidden" name="donor_id" value="{{ donor.donor_id }}">
                    <button type="submit">Update</button>
                </form>
```

```
</li>
        {% endfor %}
    </ul>

    <!-- Search Donor Form -->
    <h2>Search Donors</h2>
    <form action="/search_donors" method="POST">
        <input type="text" name="donor_name" placeholder="Enter donor name" required>
        <button type="submit">Search</button>
    </form>
</body>
</html>
```

View_patients.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>View Patients</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f3f3f3;
            margin: 0;
            padding: 20px;
        }
        h1 {
            color: #c0392b;
            text-align: center;
            margin-bottom: 20px;
        }
        h2 {
```

```
color: #2980b9;
        margin-top: 40px;
    }
    ul {
        list-style-type: none;
        padding: 0;
        margin: 0;
    }
    ul li {
        background-color: #fff;
        padding: 10px 20px;
        border-radius: 5px;
        margin-bottom: 10px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
    }
    ul li form {
        display: inline;
    }
    ul li form button[type="submit"] {
        background-color: #e74c3c;
        color: #fff;
        border: none;
        padding: 5px 10px;
        border-radius: 3px;
        cursor: pointer;
        margin-left: 10px;
    }
    ul li form button[type="submit"]:hover {
        background-color: #c0392b;
    }
    ul li a {
        background-color: #3498db;
```

```
color: #fff;
            border: none;
            padding: 5px 10px;
            border-radius: 3px;
            text-decoration: none;
            cursor: pointer;
            margin-left: 10px;
        }
        ul li a:hover {
            background-color: #2980b9;
        }
        form input[type="text"] {
            width: calc(100% - 82px);
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            margin-bottom: 10px;
        }
        form button[type="submit"] {
            background-color: #3498db;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease;
        }
        form button[type="submit"]:hover {
            background-color: #2980b9;
        }
    </style>
</head>
```

```
<body>
    <h1>View Patients</h1>
    <ul>
        {% for patient in patients %}
            <li>
                {{ patient.patient_id }} - {{ patient.patient_name }} - {{ patient.phno }} - {{
patient.patient_address }} - {{ patient.hospital_address }}
                <form action="/delete_patient/{{ patient.patient_id }}" method="POST">
                    <button type="submit">Delete</button>
                </form>
                <a href="/update_patient/{{ patient.patient_id }}">Update</a>
            </li>
        {% endfor %}
    </ul>

    <!-- Search Patient Form -->
    <h2>Search Patients</h2>
    <form action="/search_patients" method="POST">
        <input type="text" name="search_term" placeholder="Enter patient name, phone number,
address, or hospital address" required>
        <button type="submit">Search</button>
    </form>
</body>
</html>
```

Add_donor.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Add Donor</title>
    <style>
```

```
body {
        font-family: Arial, sans-serif;
        background-color: #f1d3b2;
        margin: 0;
        padding: 0;
        display: flex;
        flex-direction: column;
        align-items: center;
        justify-content: center;
        min-height: 100vh;
    }

    h1 {
        font-size:  24px;
        color: #46211a;
        margin-bottom: 20px;
    }

    form {
        background-color: #ffffff;
        border: 2px solid #46211a;
        border-radius: 10px;
        padding: 20px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        box-sizing: border-box;
        width: 350px;
    }

    label {
        display: block;
        margin-bottom: 10px;
        color: #46211a;
```

```
 }

      input[type="text"],
      input[type="number"] {
         width: 100%;
         padding: 8px;
         border: 1px solid #ccc;
         border-radius: 5px;
         box-sizing: border-box;
         margin-bottom: 15px;
      }

      input[type="submit"] {
         background-color: #46211A;
         color: #fff;
         border: none;
         padding: 10px 20px;
         border-radius: 5px;
         cursor: pointer;
         transition: background-color 0.3s ease;
      }

      input[type="submit"]:hover {
         background-color: #5e3120;
      }
   </style>
</head>
<body>
   <h1>Add Donor Details</h1>
   <form action="/add_donor" method="POST">
      <label for="Donor_id">Donor ID:</label>
      <input type="number" id="Donor_id" name="donor_id" required><br><br>
```

```
<label for="name">Name:</label>
        <input type="text" id="name" name="name" required><br><br>

        <label for="blood_type">Blood_type:</label>
        <input type="text" id="blood_type" name="blood_type" required><br><br>

        <label for="phonenumber">Phonenumber:</label>
        <input type="number" id="Phonenumber" name="Phonenumber" required><br><br>

        <label for="weight">Weight:</label>
        <input type="number" id="Weight" name="Weight" required><br><br>

        <label for="DOB">DOB:</label>
        <input type="Date" id="DOB" name="DOB" required><br><br>

        <label for="Address">Address:</label>
        <input type="text" id="address" name="address" required><br><br>

        <input type="submit" value="Submit">
    </form>
</body>
</html>
```

Admin_donor_details.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Admin Donor Details</title>
    <style>
        body {
```

```
font-family: Arial, sans-serif;

        background-color: #f1d3b2;
        margin: 0;
        padding: 0;
        display: flex;
        flex-direction: column;
        align-items: center;
        justify-content: center;
        min-height: 100vh;
    }

    header {
        font-size:  24px;
        color: #46211a;
        margin-bottom: 20px;
    }

    .donor-frame {
        background-color: #ffffff;
        border: 2px solid #46211a;
        border-radius: 10px;
        padding: 20px;
        margin:  10px;
        width:  350px;
        height: 520px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        box-sizing: border-box;
        display: inline-block;
        overflow: hidden;
        position: relative;
    }

    .donor-frame h2 {
```

```
margin-top: 0;
    }

    .donor-frame img {
        width: 90%;
        height: 40%;
        border-radius: 5px;
        margin-top: 20px;
    }

    .admin-buttons {
        margin-bottom: 20px;
    }

    .admin-buttons button {
        margin-right: 10px;
        padding: 10px 20px;
        border: none;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
        background-color: #46211A;
        color: #fff;
    }

    .admin-buttons button:hover {
        background-color: #5e3120; /* Darken the color on hover */
    }

    .delete-button,
    .update-button {
        padding: 8px 16px; /* Adjust padding */
```

```
margin-right: 5px; /* Add some space between buttons */
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
        background-color: #c23e3e; /* Red color for delete button */
        color: #fff;
    }

    .delete-button:hover,
    .update-button:hover {
        background-color: #ff5d5d; /* Darken the color on hover */
    }

    .update-button {
        background-color: #3ea7c2; /* Blue color for update button */
    }

    .update-button:hover {
        background-color: #5dc2df; /* Darken the color on hover */
    }

    .order-button {
        position: absolute;
        bottom: 10px;
        right: 10px;
        background-color: #46211A;
        color: #fff;
        border: none;
        padding: 10px 20px;
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
```

```
    .order-button:hover {
        background-color: #A43820;
      }
  </style>
</head>
<body>
  <header>Admin Donor Details
  </header>
  <div class="admin-buttons">
    <button onclick="insertDonor()">Insert Donor</button>
    <button onclick="searchDonors()">Search Donors</button>
    <a href="/"><button>Home</button></a>
  </div>
  <div id="donors"></div>

  <script>

      function addDonors() {
        fetchdonors()
        // Redirect to the page for inserting a new donor
        window.location.href = '/add_donor';

      }

      function searchDonorss() {
        const searchTerm = prompt('Enter the donor name to search:');
        if (searchTerm) {
          const filteredDonors = donorssData.filter(donor =>
donor.model.toLowerCase().includes(searchTerm.toLowerCase()));

        }
      }
  function updateDonor(donorId) {
```

```
fetchDonors();
        // Redirect to the update page with the specific donor I
      window.location.href = /update_donor/${donorId};


  }
 function fetchDonors() {
        fetch('/donor_details')
        .then(response => {
            if (!response.ok) {
                throw new Error('Network response was not ok');
            }
            return response.json();
        })
        .catch(error => console.error('Error fetching donor details:', error));
}
function createDonorFrame(donor) {
    const frame = document.createElement('div');
    frame.classList.add('donor-frame');
    frame.innerHTML = `
        <h2>${donor.name}</h2>
        <img src="${donor.address}" alt="Donor Address">
        <p><strong>ID:</strong> ${donor.donor_id}</p>
        <p><strong>Blood_type:</strong> ${donor.blood_type}</p>
        <p><strong>Phonenumber:</strong> ${donor.phonenumber}</p>
        <p><strong>DOB:</strong> ${donor.DOB}</p>
        <p><strong>Weight:</strong> ${donor.weight}</p>
        <button class="update-button"
onclick="updateDonor(${donor.donor_id})">Update</button>
    `;
    return frame;
}
fetchDonors();
</script>
```

```
</body>
</html>
```

App.py:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Admin Donor Details</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            background-color: #f1d3b2;
            margin: 0;
            padding: 0;
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            min-height: 100vh;
        }

        header {
            font-size:  24px;
            color: #46211a;
            margin-bottom: 20px;
        }

        .donor-frame {
            background-color: #ffffff;
            border: 2px solid #46211a;
```

```
    border-radius: 10px;
        padding: 20px;
        margin: 10px;
        width: 350px;
        height: 520px;
        box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
        box-sizing: border-box;
display: inline-block;
        overflow: hidden;
        position: relative;
    }

    .donor-frame h2 {
        margin-top: 0;
    }

    .donor-frame img {
        width: 90%;
        height: 40%;
        border-radius: 5px;
        margin-top: 20px;
    }

    .admin-buttons {
        margin-bottom: 20px;
    }

    .admin-buttons button {
        margin-right: 10px;
        padding: 10px 20px;
        border: none;
        border-radius: 5px;
        cursor: pointer;
```

```
background-color: #46211A;
        color: #fff;
    }

    .admin-buttons button:hover {
        background-color: #5e3120; /* Darken the color on hover */
    }

 .delete-button,
    .update-button {
        padding: 8px 16px; /* Adjust padding */
        margin-right: 5px; /* Add some space between buttons */
        border-radius: 5px;
        cursor: pointer;
        transition: background-color 0.3s ease;
        background-color: #c23e3e; /* Red color for delete button */
        color: #fff;
    }

    .delete-button:hover,
    .update-button:hover {
        background-color: #ff5d5d; /* Darken the color on hover */
    }

    .update-button {
        background-color: #3ea7c2; /* Blue color for update button */
    }

    .update-button:hover {
        background-color: #5dc2df; /* Darken the color on hover */
    }

    .order-button {
```

```
            position: absolute;
            bottom: 10px;
            right: 10px;
            background-color: #46211A;
            color: #fff;
            border: none;
            padding: 10px 20px;
            border-radius: 5px;
            cursor: pointer;
            transition: background-color 0.3s ease
    }

        .order-button:hover {
            background-color: #A43820;
        }
    </style>
</head>
<body>
    <header>Admin Donor Details
    </header>
    <div class="admin-buttons">
        <button onclick="insertDonor()">Insert Donor</button>
        <button onclick="searchDonors()">Search Donors</button>
        <a href="/"><button>Home</button></a>
    </div>
    <div id="donors"></div>

    <script>

          function addDonors() {
            fetchdonors()
            // Redirect to the page for inserting a new donor
            window.location.href = '/add_donor';
```

```
  }

      function searchDonorss() {
         const searchTerm = prompt('Enter the donor name to search:');
         if (searchTerm) {
            const filteredDonors = donorssData.filter(donor =>
donor.model.toLowerCase().includes(searchTerm.toLowerCase()));

         }
      }
function updateDonor(donorId) {

 fetchDonors()
  // Redirect to the update page with the specific donor ID
    window.location.href = /update_donor/${donorId};

      }

   function fetchDonors() {
         fetch('/donor_details')
         .then(response => {
            if (!response.ok) {
               throw new Error('Network response was not ok');
            }
            return response.json();
         })
         .catch(error => console.error('Error fetching donor details:', error));
}
function createDonorFrame(donor) {
   const frame = document.createElement('div');
   frame.classList.add('donor-frame');
   frame.innerHTML = `
      <h2>${donor.name}</h2>
```

```
<img src="${donor.address}" alt="Donor Address">
        <p><strong>ID:</strong> ${donor.donor_id}</p>
        <p><strong>Blood_type:</strong> ${donor.blood_type}</p>
        <p><strong>Phonenumber:</strong> ${donor.phonenumber}</p>
        <p><strong>DOB:</strong> ${donor.DOB}</p>
        <p><strong>Weight:</strong> ${donor.weight}</p>
        <button class="update-button"
onclick="updateDonor(${donor.donor_id})">Update</button>
    `;
    return frame;
}

fetchDonors();
</script>
</body>
</html>
```

CHAPTER 6:

6.1 FRONTEND SNAPSHOTS

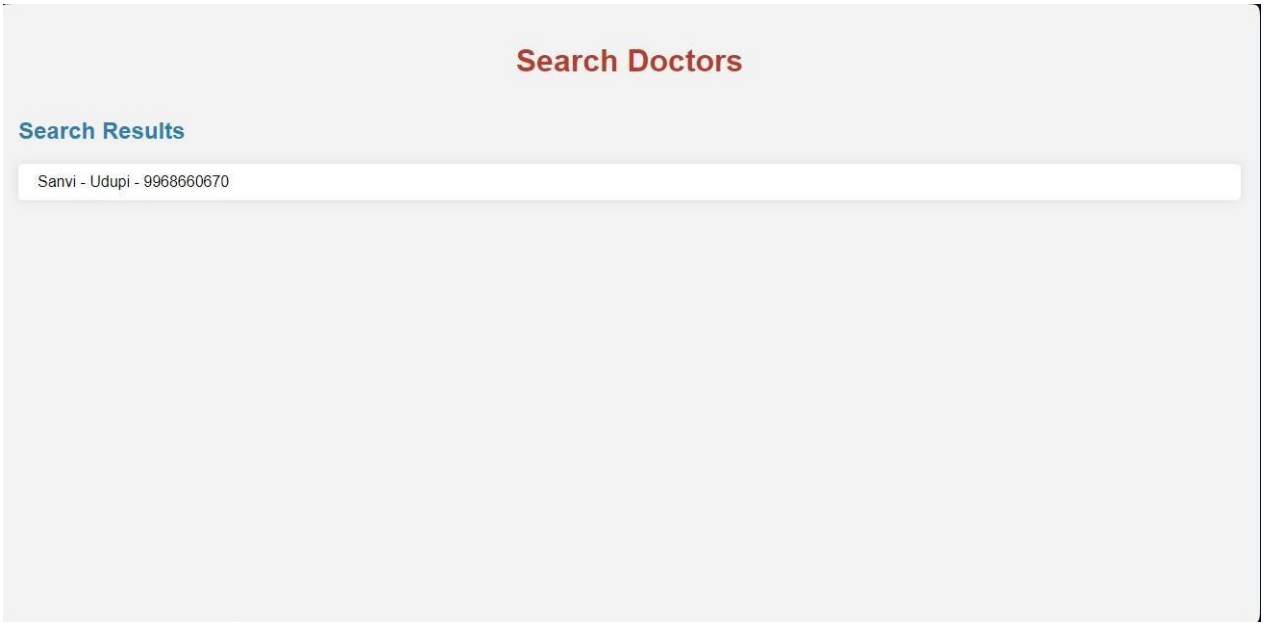


Fig.6.1.1 Search Doctors

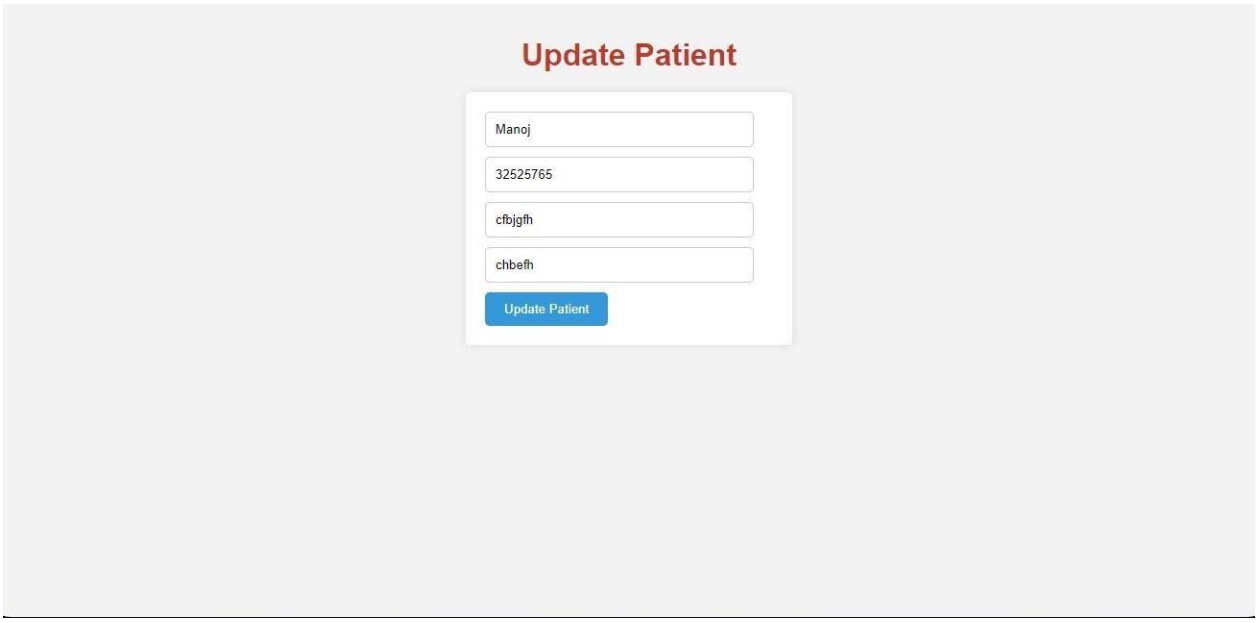


Fig 6.1.2 Update Patient

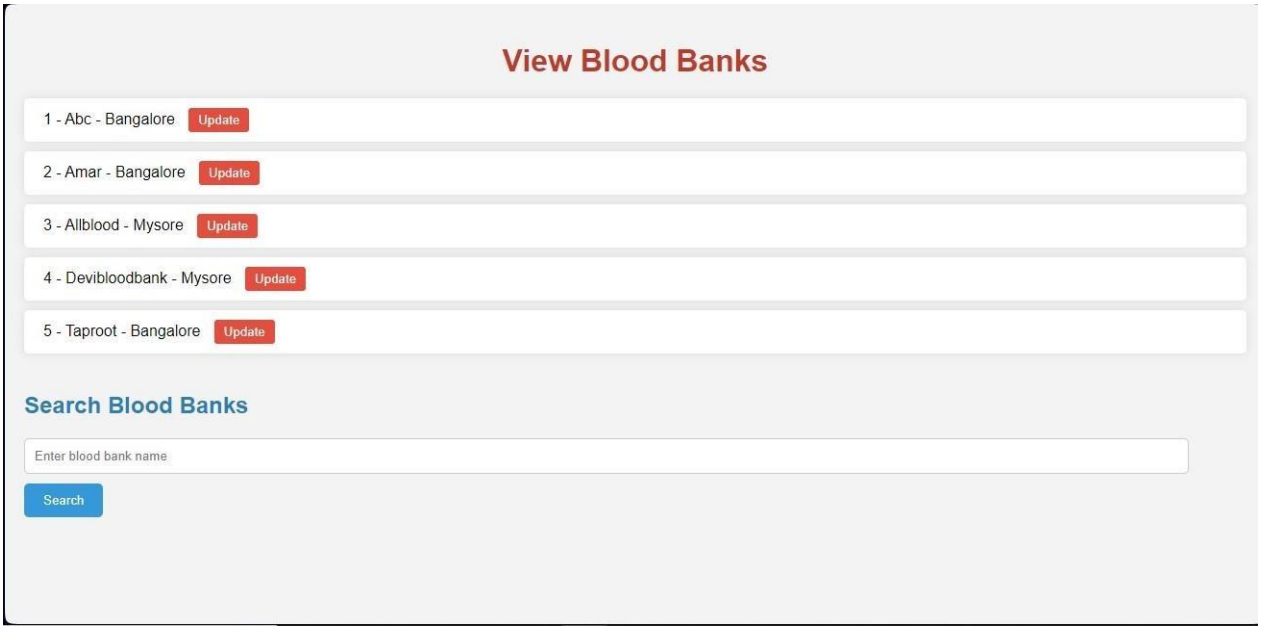


Fig 6.1.3 View Blood_Bank

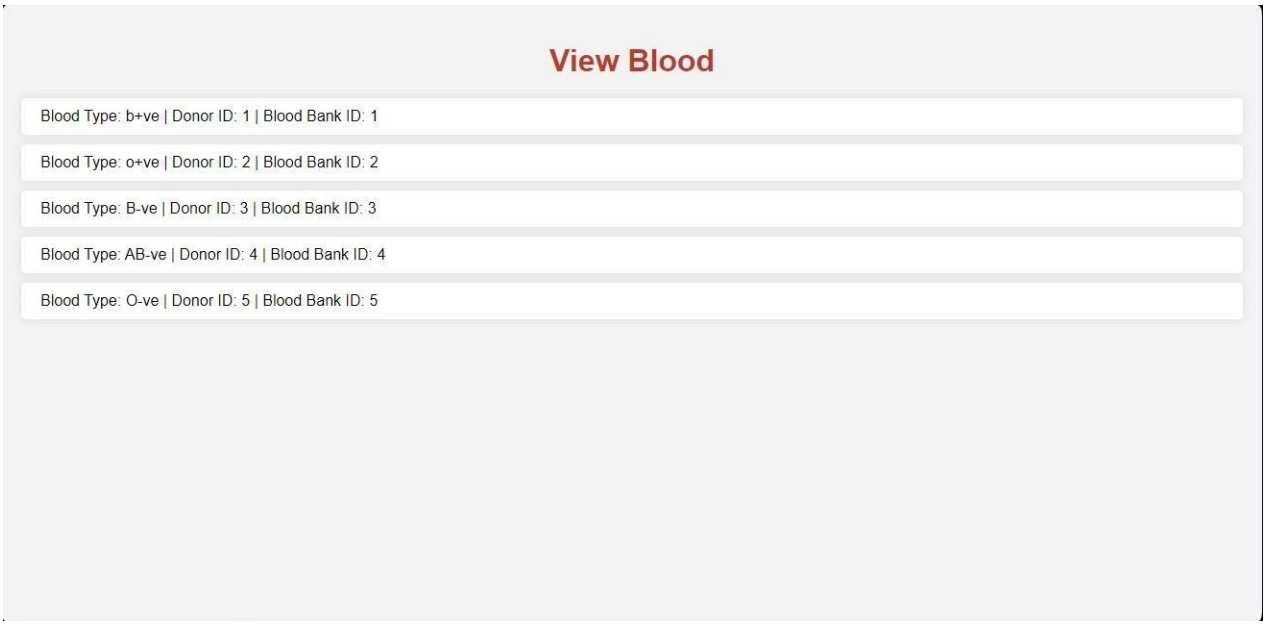


Fig 6.1.4 View Blood

Fig 6.1.5 Doctors

Fig 6.1.6 View Donors

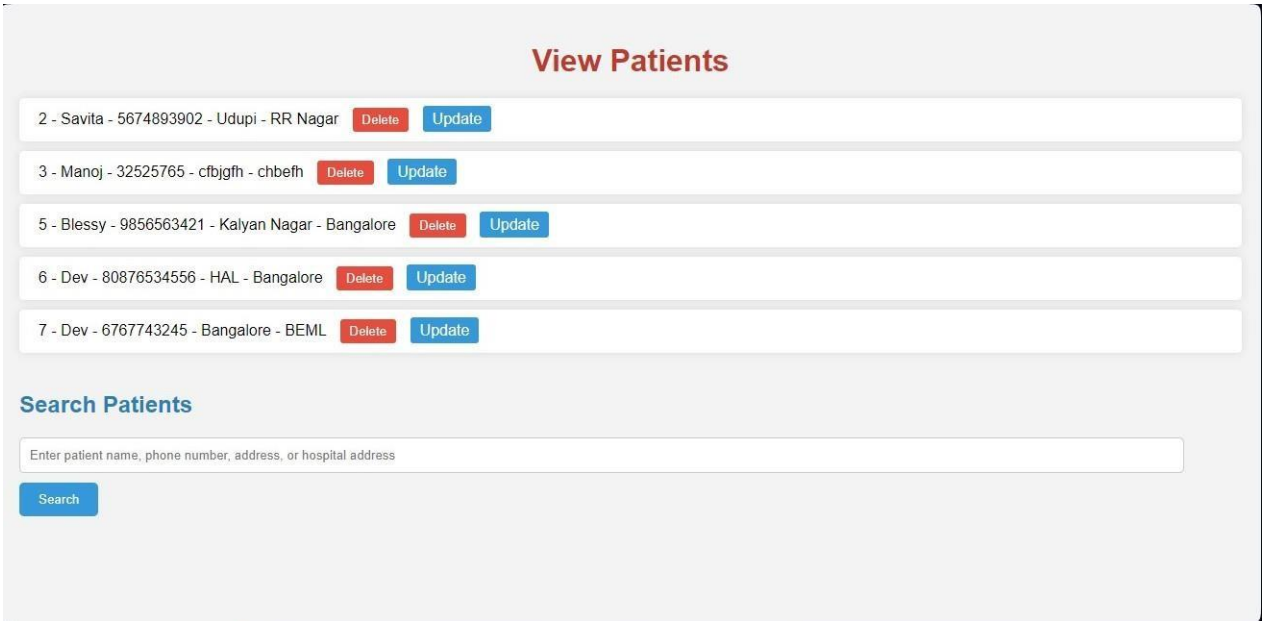


Fig 6.1.7 View Patients

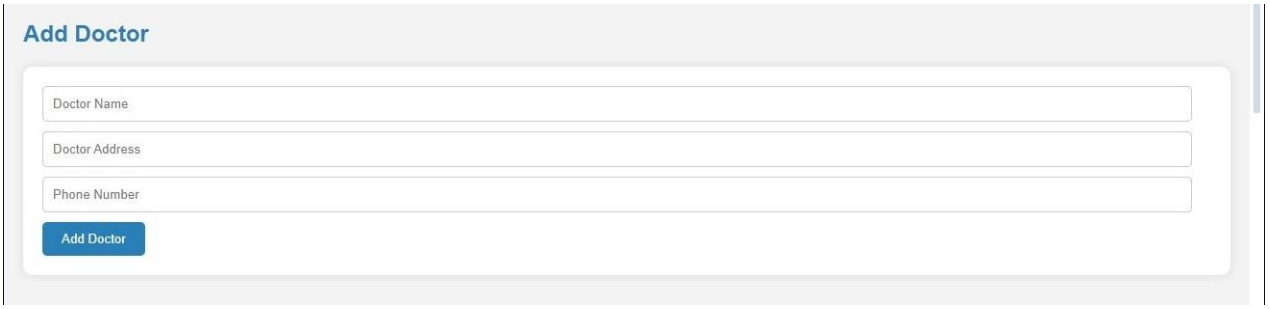


Fig 6.1.8 Add Doctor

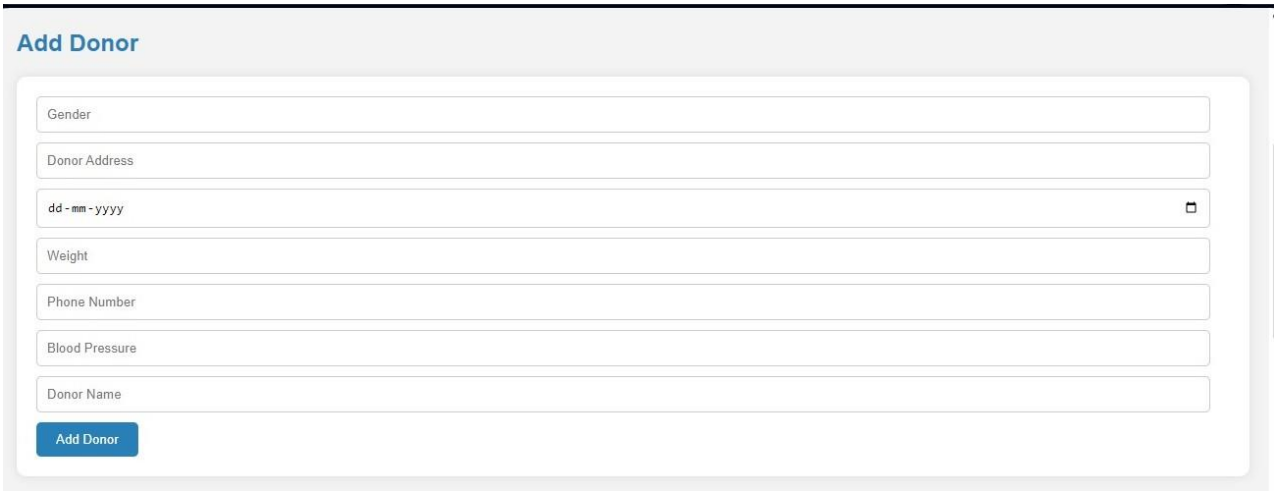


Fig 6.1.9 Add Donor

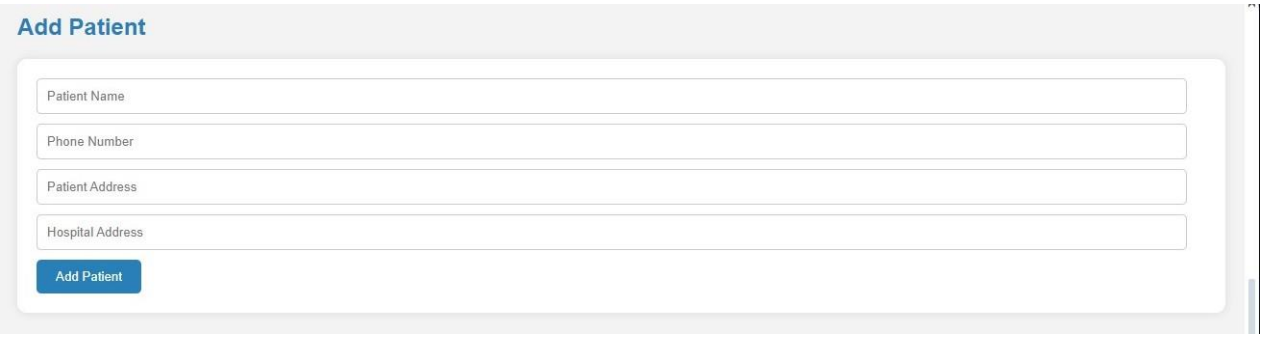


Fig 6.1.10 Add Patient

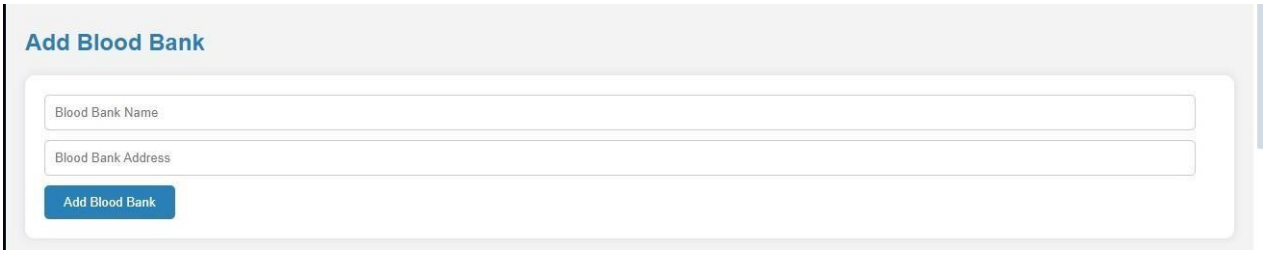


Fig 6.1.11 Add Blood Bak

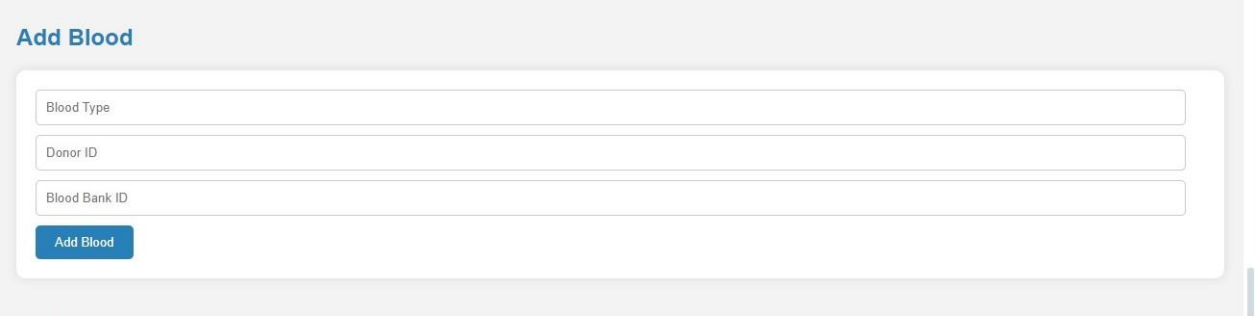


Fig 6.1.12 Add Blood

6.2 BACKEND SNAPSHOTS

```
mysql> show tables;
+-----------------------+
| Tables_in_bloodbank   |
+-----------------------+
| blood                 |
| blood_bank            |
| doctor                |
| donor                 |
| patient               |
+-----------------------+
5 rows in set (0.52 sec)
```

Fig 6.2.1 Desc_tables;

```
mysql> select * from blood;
+-------------+----------+-----------------+
| blood_type  | donor_id | blood_bank_id   |
+-------------+----------+-----------------+
| b+ve        |        1 |               1 |
| b+ve        |        1 |               1 |
| o+ve        |        2 |               5 |
| AB-ve       |        4 |               4 |
| O-ve        |        5 |               5 |
+-------------+----------+-----------------+
5 rows in set (0.00 sec)
```

Fig 6.2.2 select * from Blood;

```
mysql> select * from blood_bank;
+---------------+-----------------+--------------------+
| blood_bank_id | blood_bank_name | blood_bank_address |
+---------------+-----------------+--------------------+
|             1 | Abc             | Bangalore          |
|             2 | Amar            | Bangalore          |
|             3 | Allblood        | Mysore             |
|             4 | Devibloodbank   | Mysore             |
|             5 | Taproot         | Bangalore          |
+---------------+-----------------+--------------------+
5 rows in set (0.15 sec)
```

Fig 6.2.3 select * from Blood Bank;

```
mysql> Select * from doctor;
+-----------+-------------+-----------------+--------------+
| doctor_id | doctor_name | doctor_address  | phone_number |
+-----------+-------------+-----------------+--------------+
|         2 | Sanvi       | Udupi           | 9968660670   |
|         3 | Gauri       | Bangalore       | 9148235788   |
|         4 | Sowrabha    | Mysore          | 9686606734   |
|         5 | Shruthi     | Kerala          | 8765432111   |
|         6 | Sinchana    | Tamil Nadu      | 989876565    |
+-----------+-------------+-----------------+--------------+
5 rows in set (0.03 sec)
```

Fig 6.2.4 select * from doctor;

```
mysql> select * from donor;
+----------+--------+---------------+------------+--------+------------+----------------+------------+
| donor_id | gender | donor_address | dob        | weight | phno       | blood_pressure | donor_name |
+----------+--------+---------------+------------+--------+------------+----------------+------------+
|        1 | Male   | Chennai       | 2005-05-04 |     67 | 9897666454 | 123            | Raj        |
|        2 | Female | Bangalore     | 2024-06-19 |     56 | 8907654321 | 120            | Spoorthi   |
|        3 | Male   | Mysore        | 2024-02-09 |     78 | 9438548369 | 124            | Sowri      |
|        4 | Female | Bangalore     | 2006-01-10 |     67 | 9678965454 | 120            | Sneha      |
|        5 | Female | Bangalore     | 2024-02-10 |     55 | 9097687543 | 125            | Dora       |
+----------+--------+---------------+------------+--------+------------+----------------+------------+
5 rows in set (0.11 sec)
```

Fig 6.2.5 select * from donor;

```
mysql> select * from patient;
+------------+--------------+-------------+-----------------+------------------+
| patient_id | patient_name | phno        | patient_address | hospital_address |
+------------+--------------+-------------+-----------------+------------------+
|          2 | Savita       | 5674893902  | Udupi           | RR Nagar         |
|          3 | Manoj        | 32525765    | Udupi           | RR Nagar         |
|          4 | Blessy       | 9856563421  | Kalyan Nagar    | Bangalore        |
|          5 | Dev          | 80876534556 | HAL             | Bangalore        |
|          6 | Dev          | 6767743245  | Bangalore       | BEML             |
+------------+--------------+-------------+-----------------+------------------+
5 rows in set (0.04 sec)
```

Fig 6.2.6 select * from patient;

CONCLUSION:

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.