

Abstract:

The Hospital Management System (HMS) is a web-based application designed to streamline patient record management in healthcare facilities. Built using Java Servlets and MySQL, it enables efficient patient registration, record updates, and data retrieval through a user-friendly interface. The system enhances communication between healthcare providers and patients, ultimately improving patient care and operational efficiency. With robust error handling and data integrity measures, the HMS serves as a foundational tool for modernizing hospital operations. Future enhancements may include features like appointment scheduling and telemedicine capabilities.

Table of Contents:

S.NO	TITLE	PAGE_NO
1	Introduction	1-1
2	System Analysis	1-2
3	System Design	2-2
4	Implementation	2-2
5	References	3-3
6	SourceCode	4-21

1. Introduction:

The Hospital Management System (HMS) is a web-based application aimed at improving the efficiency of healthcare services by managing patient records and treatment plans. It provides healthcare professionals with a streamlined interface for patient registration, record updates, and data retrieval. By facilitating better communication between providers and patients, the HMS enhances overall patient care. Built using Java Servlets and MySQL, the system ensures data integrity and security. This project represents a significant advancement in modernizing hospital operations and improving healthcare delivery.

2. System Analysis:**2.1 Requirements Gathering**

The requirements for the Hospital Management System were gathered through discussions with healthcare professionals, including doctors and administrative staff. The key functional requirements identified include:

- **Patient Registration:** Ability to register new patients with essential details such as name, date of birth, gender, address, phone number, disease, symptoms, treatment plan, and follow-up information.
- **Patient Record Management:** Functionality to view, update, and delete patient records.
- **User Authentication:** Secure login for healthcare professionals to access the system.
- **Data Retrieval:** Ability to view all patient records in a tabular format.
- **Error Handling:** Proper error messages for invalid operations, such as attempting to delete a non-existent patient.

2.2 Use Case Diagram

A use case diagram can be created to visualize the interactions between users (healthcare

professionals) and the system. Key actors include:

- **Admin:** Responsible for managing patient records.
- **Doctor:** Views patient records and updates treatment plans.
- **Receptionist:** Registers new patients and manages appointments.

2.3 System Constraints

- **Database Constraints:** The system must ensure data integrity and consistency in the MySQL database.
- **Performance Constraints:** The system should handle multiple concurrent users without significant performance degradation.
- **Security Constraints:** Sensitive patient information must be protected against unauthorized access.

3. System Design

3.1 Architectural Design

The Hospital Management System follows a Model-View-Controller (MVC) architecture:

Model: Represents the data and business logic. In this case, it includes the database schema for patient records.

View: The user interface built using HTML, CSS, and Bootstrap, which allows users to interact with the system.

Controller: Java Servlets that handle user requests, process data, and return responses.

3.2 Database Design

The database schema for the HMS includes the following tables:

Patients Table: Stores patient information.

patient_id (Primary Key)

patient_name

date_of_birth

gender

address

phone_number

disease

symptoms

treatment_plan

follow_up_date

follow_up_time

3.3 User Interface Design

The user interface is designed to be intuitive and user-friendly. Key components include:

Patient Registration Form: A form for entering patient details.

Patient Records Table: A table displaying all registered patients with options to delete records.

Responsive Design: The interface is responsive, ensuring usability on various devices.

3.4 Sequence Diagrams

Sequence diagrams can be created to illustrate the flow of operations, such as registering a patient or deleting a patient record. These diagrams help visualize the interactions between the user interface, controller, and database.

4. Implementation:

- **Technologies Used:**
 - **Java:** For backend development using Servlets.
 - **MySQL:** For database management to store patient records.
 - **HTML/CSS/Bootstrap:** For frontend development to create a responsive user interface.
- **Apache Tomcat:** As the web server to deploy the Java Servlets.

References:**Books:**

- "Database System Concepts" by Silberschatz, Korth, and Sudarshan.
- "Java Servlet Programming" by Jason Hunter.

SourceCode:

Hospital.html

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

  <!-- Include Bootstrap CSS from CDN -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384 -
KyZXEJv3v7K+VWRpR2M0X5hXs6eJIU2OT2ROi5SZbpuYlndhfIxxFbd1P4FzC1Gr"
crossorigin="anonymous">
<style>
  /* General Body Styling */
  body {
    font-family: 'Arial', sans-serif;
    /* background-color: #f0f4f7; /* Light gray-blue for a professional look */
    background-image: url('2.jpg');
    color: #333;
    margin: 0;
    padding: 0;
  }

  /* Container Styling */
  .form-container {
    background-color: #ffffff; /* White background for the form */
    padding: 40px;
    border-radius: 10px;
    box-shadow: 0 4px 16px rgba(0, 0, 0, 0.1); /* Subtle shadow for depth */
    max-width: 800px;
    margin: 40px auto;
    border-top: 4px solid #4CAF50; /* Green accent line at the top */
  }

  /* Main Header (h2) */
  h2 {
    text-align: center;
    color: #4CAF50; /* Green color to represent health and positivity */
```

```
margin-bottom: 30px;
font-size: 28px;
font-weight: bold;
}

/* Smaller Header for Subsections (h3) */
h3 {
  color: #333;
  font-size: 22px;
  margin-bottom: 20px;
  border-bottom: 2px solid #ddd;
  padding-bottom: 10px;
}

/* Form Field Labels */
.form-label {
  font-size: 16px;
  font-weight: bold;
  color: #555;
}

/* Form Inputs */
.form-control, .form-select {
  border-radius: 5px;
  border: 1px solid #ccc;
  padding: 12px;
  font-size: 16px;
  width: 100%;
  margin-bottom: 15px;
}

.form-control:focus, .form-select:focus {
  border-color: #4CAF50;
  box-shadow: 0 0 5px rgba(76, 175, 80, 0.5); /* Green focus effect */
}

/* Button Styling */
.btn {
  padding: 12px;
  font-size: 16px;
```

```
font-weight: bold;
border-radius: 5px;
width: 100%;
margin-top: 20px;
}

/* Success Button */
.btn-success {
  background-color: #4CAF50;
  border: none;
  color: white;
}

.btn-success:hover {
  background-color: #45a049;
}

/* Danger Button */
.btn-danger {
  background-color: #f44336;
  border: none;
  color: white;
}

.btn-danger:hover {
  background-color: #d32f2f;
}

/* View All Button */
.btn-info {
  background-color: #2196F3;
  color: white;
  font-weight: normal;
}

.btn-info:hover {
  background-color: #1976D2;
}

/* Note Section Styling */
```

```
.note {
    font-size: 14px;
    color: #777;
    margin-top: 20px;
    text-align: center;
}

/* Responsive Styling */
@media (max-width: 600px) {
    .form-container {
        padding: 20px;
    }

    .form-control, .form-select {
        font-size: 14px;
    }

    h2 {
        font-size: 24px;
    }
}

/* Table Styling */
table {
    width: 100%;
    border-collapse: collapse;
    margin-top: 40px;
    font-size: 16px;
}

th, td {
    padding: 12px;
    text-align: left;
    border: 1px solid #ddd;
}

th {
    background-color: #4CAF50;
    color: white;
}
```

```
tr:nth-child(even) {
    background-color: #f9f9f9;
}

tr:hover {
    background-color: #f1f1f1;
}

/* Delete Button in Table */
a.delete-btn {
    color: #f44336;
    font-weight: bold;
    text-decoration: none;
}

a.delete-btn:hover {
    text-decoration: underline;
}
</style>
</head>
<body>

<div class="container d-flex justify-content-center align-items-center vh-100">
    <div class="form-container col-12 col-md-6">
        <h2>Welcome to the Hospital Management System</h2>
        <form method="POST" action="HospitalManagementSystem">

            <!-- Patient Registration Section -->
            <label for="patient_id" class="form-label">Patient ID:</label>
            <input type="text" class="form-control" name="patient_id" id="patient_id"
placeholder="Enter Patient ID for Registration" required>
            <br>

            <label for="patient_name" class="form-label">Patient Name:</label>
            <input type="text" class="form-control" name="patient_name" id="patient_name"
placeholder="Enter Patient's Full Name" required>
            <br>

            <label for="date_of_birth" class="form-label">Date of Birth:</label>
            <input type="date" class="form-control" name="date_of_birth" id="date_of_birth">
```


required>

<label for="gender" class="form-label">Gender:</label>

<select name="gender" id="gender" class="form-select" required>

<option value="Male">Male</option>

<option value="Female">Female</option>

<option value="Other">Other</option>

</select>

<label for="address" class="form-label">Address:</label>

<input type="text" class="form-control" name="address" id="address"
placeholder="Enter Address" required>

<label for="phone_number" class="form-label">Phone Number:</label>

<input type="text" class="form-control" name="phone_number" id="phone_number"
placeholder="Enter Phone Number" required>

<label for="disease" class="form-label">Disease:</label>

<input type="text" class="form-control" name="disease" id="disease"
placeholder="Enter Disease Name" required>

<label for="symptoms" class="form-label">Symptoms:</label>

<input type="text" class="form-control" name="symptoms" id="symptoms"
placeholder="Describe Symptoms" required>

<label for="treatment_plan" class="form-label">Prescribed Treatment:</label>

<input type="text" class="form-control" name="treatment_plan"
id="treatment_plan" placeholder="Enter Prescribed Treatment" required>

<label for="follow_up_date" class="form-label">Follow-up Date:</label>

<input type="date" class="form-control" name="follow_up_date"
id="follow_up_date" required>


```
<label for="follow_up_time" class="form-label">Follow-up Time:</label>
<input type="time" class="form-control" name="follow_up_time"
id="follow_up_time" required>
<br>

<button type="submit" class="btn btn-success w-100">Submit</button>
</form>

<!-- Delete Patient Section -->
<h3 class="mt-5">Delete a Patient</h3>
<form method="POST" action="HospitalManagementSystem">
  <label for="delete_patient_id" class="form-label">Enter Patient ID to
Delete:</label>
  <input type="text" class="form-control" name="delete_patient_id"
id="delete_patient_id" placeholder="Enter Patient ID" required>
  <br>
  <button type="submit" class="btn btn-danger w-100">Delete Patient</button>
</form>

<div class="note">
  <p>Note: Use the Patient ID for deletion.</p>
</div>
</div>
<a href="HospitalManagementSystem?viewAll=true">
  <button>View All Patients</button>
</a>

<!-- Include Bootstrap JS from CDN -->
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0 -
alpha1/dist/js/bootstrap.bundle.min.js" integrity="sha384 -
pzjw8f+ua7Kw1TIq0otJ9V2t5tJ6pRZoyl9frHlnJ6Wg4dZBzN2ptF2Z9s9Le3kl"
crossorigin="anonymous"></script>
</body>
</html>
```

HospitalServlet.java:

```
package Hos;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

@WebServlet("/HospitalManagementSystem")

public class HospitalManagementSystemServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    static final String DB_URL = "jdbc:mysql://localhost:1009/hospital";
    static final String DB_USER = "root";
    static final String DB_PASSWORD = "8826";

    // Method to display all patient records from the database
    private void displayPatientRecords(Connection connection, PrintWriter out) throws SQLException {
        String selectQuery = "SELECT * FROM Patients";
        Statement statement = connection.createStatement();
        ResultSet resultSet = statement.executeQuery(selectQuery);

        out.println("<h3 style='color: #4CAF50; text-align: center;'>Patient Records</h3>");
        out.println("<table style='width: 100%; border-collapse: collapse; margin-top: 20px;'>");
```

```
out.println("<thead style='background-color: #4CAF50; color: white;'>");
out.println("<tr><th>Patient ID</th><th>Patient
Name</th><th>Disease</th><th>Symptoms</th><th>Treatment</th><th>Follow-up
Date</th><th>Follow-up Time</th><th>Delete</th></tr>");
out.println("</thead>");
out.println("<tbody>");

while (resultSet.next()) {
    int patientId = resultSet.getInt("patient_id");
    String patientName = resultSet.getString("patient_name");
    String disease = resultSet.getString("disease");
    String symptoms = resultSet.getString("symptoms");
    String treatmentPlan = resultSet.getString("treatment_plan");
    java.sql.Date followUpDate = resultSet.getDate("follow_up_date");
    String followUpTime = resultSet.getString("follow_up_time");

    out.println("<tr>");
    out.println("<td>" + patientId + "</td>");
    out.println("<td>" + patientName + "</td>");
    out.println("<td>" + disease + "</td>");
    out.println("<td>" + symptoms + "</td>");
    out.println("<td>" + treatmentPlan + "</td>");
    out.println("<td>" + followUpDate + "</td>");
    out.println("<td>" + followUpTime + "</td>");
    out.println("<td><form method='POST' action='HospitalManagementSystem'>" +
        "<input type='hidden' name='delete_patient_id' value='" + patientId + "'>" +
        "<button type='submit'>Delete</button>" +
        "</form></td>");
    out.println("</tr>");
}
out.println("</table>");
}
```

```
// Method to delete a patient from the database
private void deletePatient(int patientId, Connection connection, PrintWriter out) throws SQLException
{
    String deleteQuery = "DELETE FROM Patients WHERE patient_id = ?";
    try (PreparedStatement preparedStatement = connection.prepareStatement(deleteQuery)) {
        preparedStatement.setInt(1, patientId);
        int rowsAffected = preparedStatement.executeUpdate();
        if (rowsAffected > 0) {
            out.println("<html><head><style>");
            out.println("body { font-family: Arial, sans-serif; color: #333; background-color: #f9f9f9; }");
            out.println("h3 { color: #4CAF50; font-size: 20px; }");
            out.println(".details { font-size: 16px; color: #555; }");
            out.println(".success { background-color: #d4edda; padding: 15px; border-radius: 5px; border: 1px solid #c3e6cb; }");
            out.println(".warning { background-color: #fff3cd; padding: 15px; border-radius: 5px; border: 1px solid #ffeeba; }");
            out.println(".error { background-color: #f8d7da; padding: 15px; border-radius: 5px; border: 1px solid #f5c6cb; }");
            out.println("</style></head><body>");

            out.println("<div class='success'>");
            out.println("<h3>Patient with ID " + patientId + " has been deleted from the system successfully!</h3>");
            out.println("<p class='details'>Please ensure all necessary patient records are backed up before deletion. If this was done in error, contact system admin immediately.</p>");
            out.println("</div>");

            out.println("<div class='success'>");
            out.println("<h3>Recovery Update: Patient has fully recovered!</h3>");
            out.println("<p class='details'>We are pleased to inform you that the patient is now in good health. Please take the following steps for post-recovery care:</p>");
            out.println("<ul class='details'>");
            out.println("<li>Continue taking prescribed medication as per the doctor's instructions.</li>");
            out.println("<li>Follow-up visit scheduled for: <strong>Next Tuesday at 10:00 AM</strong>.</li>");
        }
    }
}
```

```
        out.println("<li>Maintain a balanced diet and avoid stress during the recovery period.</li>");
        out.println("</ul>");
        out.println("</div>");

        out.println("<div class='warning'>");
        out.println("<h3>Important Reminder:</h3>");
        out.println("<p class='details'>Always consult your physician if you experience any discomfort
or unusual symptoms during your recovery period. Your health is our priority!</p>");
        out.println("</div>");

        out.println("<div class='error'>");
        out.println("<h3>Error: Unable to process the deletion at this time.</h3>");
        out.println("<p class='details'>There was an issue while deleting the patient record. Please try
again later or contact technical support for assistance.</p>");
        out.println("</div>");

        out.println("</body></html>");
    } else {
        out.println("<style>");
        out.println("body { font-family: Arial, sans-serif; background-color: #f4f4f4; color: #333; }");
        out.println("h3 { color: #d9534f; }"); // Bootstrap danger color
        out.println("h2 { color: #5bc0de; }"); // Bootstrap info color
        out.println(".message { padding: 15px; border: 1px solid #d9534f; border-radius: 5px;
background-color: #f9d6d5; }");
        out.println(".button { display: inline-block; padding: 10px 15px; margin-top: 20px; background-
color: #5bc0de; color: white; text-decoration: none; border-radius: 5px; }");
        out.println(".button:hover { background-color: #31b0d5; }"); // Darker shade on hover
        out.println("</style>");

        out.println("<div class='message'>");
        out.println("<h3>Patient ID not found. No patient was deleted.</h3>");
        out.println("<h2>Please enter a valid Patient ID!</h2>");
        out.println("<p>If you believe this is an error, please contact support for assistance.</p>");
```

```
        out.println("<p>Alternatively, you can go back to the old page to try again.</p>");
        out.println("<a href='hospital.html' class='button'>Try Again</a>");
        out.println("</div>");
        out.println(" <a href=\"HospitalManagementSystem?viewAll=true\">\r\n"
            + "    <button>View All Patients</button>\r\n"
            + " </a>");
    }
}

// Process POST request for registering or deleting patients
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();

    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
    } catch (ClassNotFoundException e) {
        out.println("<h3>Error loading database driver!</h3>");
        e.printStackTrace(out);
        return;
    }

    try (Connection connection = DriverManager.getConnection(DB_URL, DB_USER, DB_PASSWORD)) {
        // Handle delete patient request
        if (request.getParameter("delete_patient_id") != null) {
            int patientIdToDelete = Integer.parseInt(request.getParameter("delete_patient_id"));
            deletePatient(patientIdToDelete, connection, out); // Delete the patient
        }

        // Register new patient
        int patientId = Integer.parseInt(request.getParameter("patient_id"));
```

```
String patientName = request.getParameter("patient_name");
String dateOfBirth = request.getParameter("date_of_birth");
String gender = request.getParameter("gender");
String address = request.getParameter("address");
String phoneNumber = request.getParameter("phone_number");
String disease = request.getParameter("disease");
String symptoms = request.getParameter("symptoms");
String treatmentPlan = request.getParameter("treatment_plan");
String followUpDate = request.getParameter("follow_up_date");
String followUpTime = request.getParameter("follow_up_time");

// Insert the patient details into the database

String insertQuery = "INSERT INTO Patients (patient_id, patient_name, date_of_birth, gender,
address, phone_number, disease, symptoms, treatment_plan, follow_up_date, follow_up_time) " +
    "VALUES (?, ?, ?, ?, ?, ?, ?, ?, ?, ?, ?)";

PreparedStatement preparedStatement = connection.prepareStatement(insertQuery);
preparedStatement.setInt(1, patientId);
preparedStatement.setString(2, patientName);
preparedStatement.setString(3, dateOfBirth);
preparedStatement.setString(4, gender);
preparedStatement.setString(5, address);
preparedStatement.setString(6, phoneNumber);
preparedStatement.setString(7, disease);
preparedStatement.setString(8, symptoms);
preparedStatement.setString(9, treatmentPlan);
preparedStatement.setString(10, followUpDate);
preparedStatement.setString(11, followUpTime);

int rowsInserted = preparedStatement.executeUpdate();
if (rowsInserted > 0) {
    out.println("<div style='background-color: #d4edda; color: #155724; border: 1px solid #c3e6cb;
padding: 15px; margin-top: 20px; border-radius: 5px; text-align: center;'>");
    out.println("<h3 style='margin: 0; font-size: 22px;'>Patient details inserted successfully!</h3>");
}
```



```
out.println("</div>");
out.println("<html><head><style>");
out.println("body { font-family: Arial, sans-serif; background-color: #f4f4f4; color: #333; padding:
20px; }");
out.println("h3 { color: #4CAF50; font-size: 22px; }");
out.println(".message-container { background-color: #d4edda; padding: 20px; border-radius:
5px; font-size: 18px; border: 1px solid #c3e6cb; margin-bottom: 20px; }");
out.println(".patient-info { background-color: #ffffff; padding: 15px; border-radius: 8px; box-
shadow: 0px 4px 6px rgba(0, 0, 0, 0.1); }");
out.println(".patient-info h4 { color: #333; font-size: 20px; }");
out.println(".patient-info p { font-size: 16px; color: #555; }");
out.println("table { width: 100%; border-collapse: collapse; margin-top: 20px; }");
out.println("th, td { padding: 12px; text-align: left; border: 1px solid #ddd; }");
out.println(".btn { background-color: #4CAF50; color: white; padding: 10px 15px; text-align:
center; text-decoration: none; border-radius: 5px; cursor: pointer; }");
out.println(".btn:hover { background-color: #45a049; }");
out.println("</style></head><body>");
```

```
// Success Message
```

```
out.println("<div class='message-container'>");
out.println("<h3>Patient Details Inserted Successfully!</h3>");
out.println("<p>Dear " + patientName + ",</p>");
out.println("<p>Your details have been successfully inserted into our system. Below is a
summary of your health information:</p>");
out.println("</div>");
```

```
// Patient Summary Information
```

```
out.println("<div class='patient-info'>");
out.println("<h4>Patient Information:</h4>");
out.println("<p><strong>Patient Name:</strong> " + patientName + "</p>");
out.println("<p><strong>Patient ID:</strong> " + patientId + "</p>");
out.println("<p><strong>Disease:</strong> " + disease + "</p>");
out.println("<p><strong>Symptoms:</strong> " + symptoms + "</p>");
out.println("<p><strong>Treatment Plan:</strong> " + treatmentPlan + "</p>");
```

```
out.println("<p><strong>Follow-up Date:</strong> " + followUpDate + "</p>");
out.println("<p><strong>Follow-up Time:</strong> " + followUpTime + "</p>");
out.println("</div>");

// Assigned Doctors Information
out.println("<div class='message-container'>");
out.println("<h4>Assigned Doctors:</h4>");
out.println("<p>Below are the doctors assigned to your case along with their available
times:</p>");
out.println("<ul>");
out.println("<li><strong>Dr.J.Jayaraj:</strong> Monday, Wednesday, Friday - 9 AM to 12
PM</li>");
out.println("<li><strong>Dr.J.Vidhya :</strong> Tuesday, Thursday - 1 PM to 4 PM</li>");

out.println("</ul>");
out.println("</div>");

// Additional Actions (Buttons)
out.println("<div class='message-container'>");
out.println("<h4>Next Steps:</h4>");
out.println("<p>Would you like to perform any of the following actions?</p>");
out.println("<a href='hospital.html' class='btn'>Add Another Patient</a>");
out.println("</div>");

// Display patient records (if required)

out.println("</body></html>");
}else {
    // Error Message if insert fails
    out.println("<html><head><style>");
    out.println("body { font-family: Arial, sans-serif; background-color: #f4f4f4; color: #333; padding:
20px; }");
    out.println("h3 { color: #f8d7da; font-size: 22px; }");
```

```
        out.println(".error { background-color: #f8d7da; padding: 20px; border-radius: 5px; font-size: 18px; border: 1px solid #f5c6cb; margin-bottom: 20px; }");
        out.println(".error p { font-size: 16px; color: #555; }");
        out.println(".btn { background-color: #dc3545; color: white; padding: 10px 15px; text-align: center; text-decoration: none; border-radius: 5px; cursor: pointer; }");
        out.println(".btn:hover { background-color: #c82333; }");
        out.println("</style></head><body>");

        out.println("<div class='error'>");
        out.println("<h3>Error: Failed to Insert Patient Details</h3>");
        out.println("<p>There was an issue while adding the patient details. Please try again later.</p>");
        out.println("<p>If the problem persists, contact support for assistance.</p>");
        out.println("<p>Would you like to:</p>");
        out.println("<ul>");
        out.println("<li><a href='hospital.html' class='btn'>Go Back to Patient Entry</a></li>");
        out.println("<li><a href='support.html' class='btn'>Contact Support</a></li>");
        out.println("</ul>");
        out.println("</div>");

        out.println("</body></html>");
    }

    // Display all patients after insertion
    displayPatientRecords(connection, out);
} catch (SQLException e) {
    out.println("<html><head><style>");
    out.println("body { font-family: Arial, sans-serif; background-color: #f4f4f4; color: #333; padding: 20px; }");
    out.println("h3 { color: #f8d7da; font-size: 22px; }");
    out.println(".error { background-color: #f8d7da; padding: 20px; border-radius: 5px; font-size: 18px; border: 1px solid #f5c6cb; margin-bottom: 20px; }");
    out.println(".error p { font-size: 16px; color: #555; }");
    out.println(".btn { background-color: #dc3545; color: white; padding: 10px 15px; text-align: center; text-decoration: none; border-radius: 5px; cursor: pointer; }");
    out.println(".btn:hover { background-color: #c82333; }");
    out.println("</style></head><body>");
    out.println("<div class='error'>");
    out.println("<h3>Error: Failed to Insert Patient Details</h3>");
    out.println("<p>There was an issue while adding the patient details. Please try again later.</p>");
    out.println("<p>If the problem persists, contact support for assistance.</p>");
    out.println("<p>Would you like to:</p>");
    out.println("<ul>");
    out.println("<li><a href='hospital.html' class='btn'>Go Back to Patient Entry</a></li>");
    out.println("<li><a href='support.html' class='btn'>Contact Support</a></li>");
    out.println("</ul>");
    out.println("</div>");
    out.println("</body></html>");
}
```

```
center; text-decoration: none; border-radius: 5px; cursor: pointer; }");
    out.println(".btn:hover { background-color: #c82333; }");
    out.println("</style></head><body>");

    out.println("<div class='error'>");
    out.println("<h3>Error: Failed to Insert Patient Details</h3>");
    out.println("<p>There was an issue while adding the patient details. Please try again
later.</p>");
    out.println("<p>If the problem persists, contact support for assistance.</p>");
    out.println("<p>Would you like to:</p>");
    out.println("<ul>");
    out.println("<li><a href='hospital.html' class='btn'>Go Back to Patient Entry</a></li>");
    out.println("<li><a href='support.html' class='btn'>Contact Support</a></li>");
    out.println("</ul>");
    out.println("</div>");

    out.println("</body></html>");
    e.printStackTrace(out);
}
}

// Handle GET request to view all patients
protected void doGet(HttpServletRequest request, HttpServletResponse response)
    throws ServletException, IOException {
    response.setContentType("text/html");
    PrintWriter out = response.getWriter();

    try (Connection connection = DriverManager.getConnection(DB_URL, DB_USER, DB_PASSWORD)) {
        // Display patient records if 'viewAll' parameter is true
        if ("true".equals(request.getParameter("viewAll"))) {
            displayPatientRecords(connection, out);

        } else {
```

```
// Redirect to the patient registration form if not 'viewAll'
response.sendRedirect("hospital.html");

}
} catch (SQLException e) {
    out.println("<h3>Error interacting with the database!</h3>");

    e.printStackTrace(out);
}
}
```

Output:

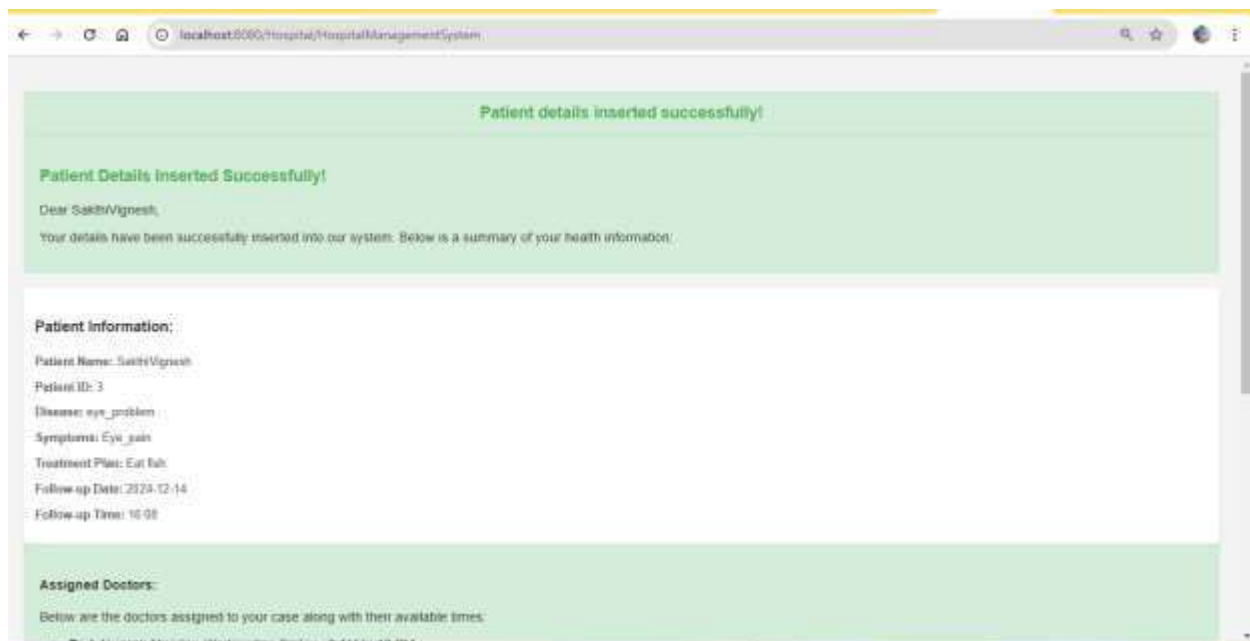
The screenshot displays two views of a web application for hospital management. The top view shows the registration form, and the bottom view shows the delete patient form. Both forms are overlaid on a background image of a stethoscope and a keyboard.

Registration Form:

- Welcome to the Hospital Management System**
- Patient ID:** Enter Patient ID for Registration
- Patient Name:** Enter Patient's Full Name
- Date of Birth:** dd-mm-yyyy
- Gender:** Male
- Address:** Enter Address
- Phone Number:** Enter Phone Number
- Disease:** Enter Disease Name
- Symptoms:** Describe Symptoms
- Prescribed Treatment:** Enter Prescribed Treatment

Delete Patient Form:

- Delete a Patient**
- Enter Patient ID to Delete:** Enter Patient ID
- Delete Patient**
- Note:** Use the Patient ID for deletion.

DELETE PATIENT:**INSERT PATIENT:**

JAYARAJ.J-717822P221

