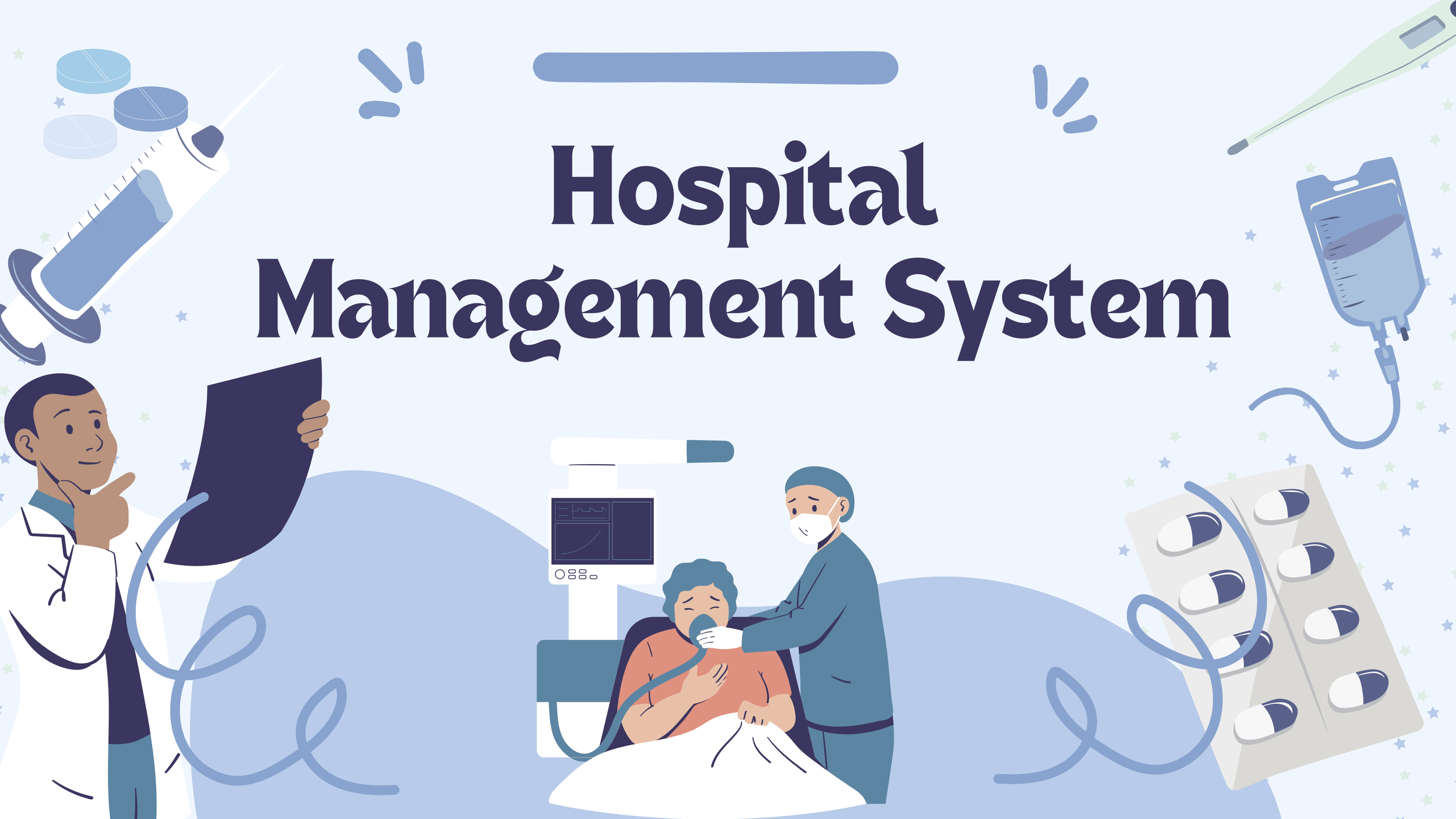
Hospital Management System



Introduction

Our Project offers an end-to-end solution for patients, doctors, and pharmacies by integrating the following features:

Online Appointment Booking:

Patients can schedule consultations with doctors at their convenience.

Home Diagnostic Sample Collection:

Patients can book diagnostic tests online, and trained professionals will collect samples directly from their homes.

Online Test Reports:

Doctors can access diagnostic reports instantly through the platform, enabling faster and more informed medical decisions.

Digital Prescriptions:

Based on the test results, doctors can provide prescriptions directly online.

Online Medicine Booking and Delivery:

Patients can order prescribed medicines through the system, which will be delivered to their doorstep.

Doctor -Patient Communication:

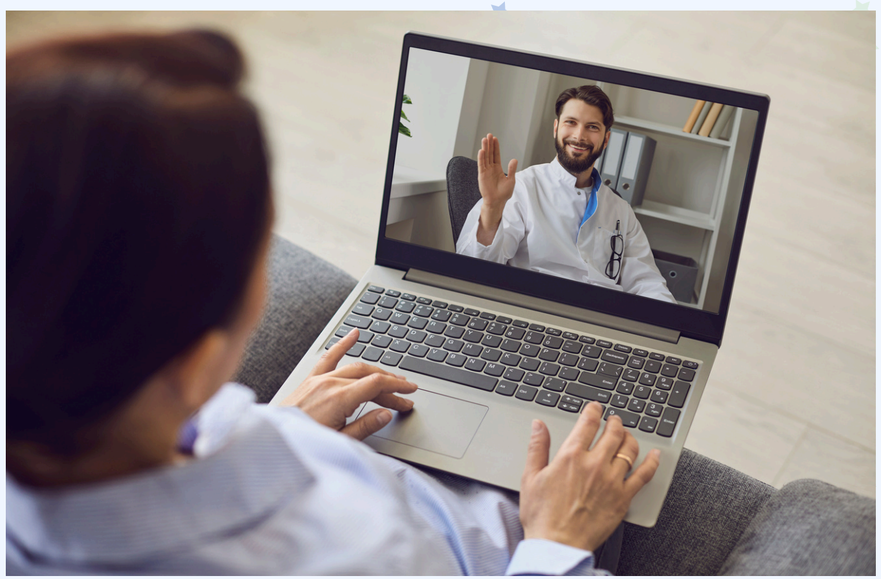
Patients can communicate with the trained professionals through the website .

Insurance:

claiming Insurance process will be easier and faster.

Expenditure & Billing:

The billing process would be easier as everything is online the patient can directly pay after taking the services.



Survey of Existing websites

Survey 1:

Website: www.mayoclinic.org

·Key Features:

·· **User-Centric Design:** The website offers a clean and modern interface, ensuring ease of navigation for users seeking medical information.

·· **Comprehensive Medical Resources:** Provides detailed information on diseases, conditions, and treatments, serving as a reliable resource for patients and healthcare professionals.

·· **Appointment Scheduling:** Integrated system allowing patients to book appointments with specialists across various departments.

·· **Patient Portal Access:** Secure access for patients to view test results, medical records, and communicate with their healthcare providers.

·· **Mobile Responsiveness:** Optimized for various devices, ensuring accessibility and a seamless experience on smartphones and tablets.

·Awards & Recognition:

·· Consistently ranked among the top hospital websites for design and functionality.

·· Praised for its user-friendly interface and comprehensive content.

Survey 2:

Website: : https://www.hopkinsmedicine.org

·Key Features:

·· **User-Centric Design:** The website boasts a clean, modern interface that allows users to easily navigate through medical resources and services, ensuring a smooth and efficient user experience.

·· **Appointment Scheduling:** ·The website includes a seamless appointment scheduling system, enabling patients to easily book appointments with specialists and clinicians across various departments.

·· **Patient Portal Access:** ·Secure, personalized access for patients to view their test results, medical records, and communicate directly with their healthcare providers, enhancing patient engagement and communication.

Potential Disadvantages / Areas for Improvement:

- Complex Navigation for New Users: Certain sections, like insurance or treatment details, may be hard to find for first-time users.
- Overwhelming Information: The abundance of detailed medical content can be challenging for users seeking quick, simplified information.
- Limited Multilingual Support: Expanding language options would enhance accessibility for non-English speaking users globally.
- Appointment Scheduling Issues: The scheduling system can be time-consuming, especially for urgent or same-day appointments.
- Lack of Real-Time Chat Support: Adding live chat would provide immediate assistance and improve user support.

Survey 3:

Website: : https://www.sunrisehospitals.com/

·Key Features:

·**User-Friendly Design:** ·The website has a clean, straightforward layout, making it easy for users to navigate and find hospital services, doctors, and facilities.
.**Appointment Scheduling**: Users can schedule appointments directly through the website with specialists and various departments, making it convenient for patients.
.**Patient Portal Access:** Secure online access for patients to manage their health records, view test results, and communicate with healthcare providers.
·**Comprehensive Medical Information:** Provides information on various specialties, treatments, and healthcare services available at Sunrise Hospitals, offering a reliable resource for both patients and healthcare professionals.

Potential Disadvantages / Areas for Improvement:

- Limited multilingual support restricts accessibility for diverse users.
- Basic search functionality makes finding specific information harder.
- More detailed patient testimonials could enhance trust and user understanding.
- Inconsistent load times affect browsing experience and need optimization.
- Absence of live chat support limits immediate assistance for appointments or queries.

Technology Stack

Front-end technology :

Java Servlet Pages, html, CSS, Bootstrap, JavaScript, jQuery Popper.js

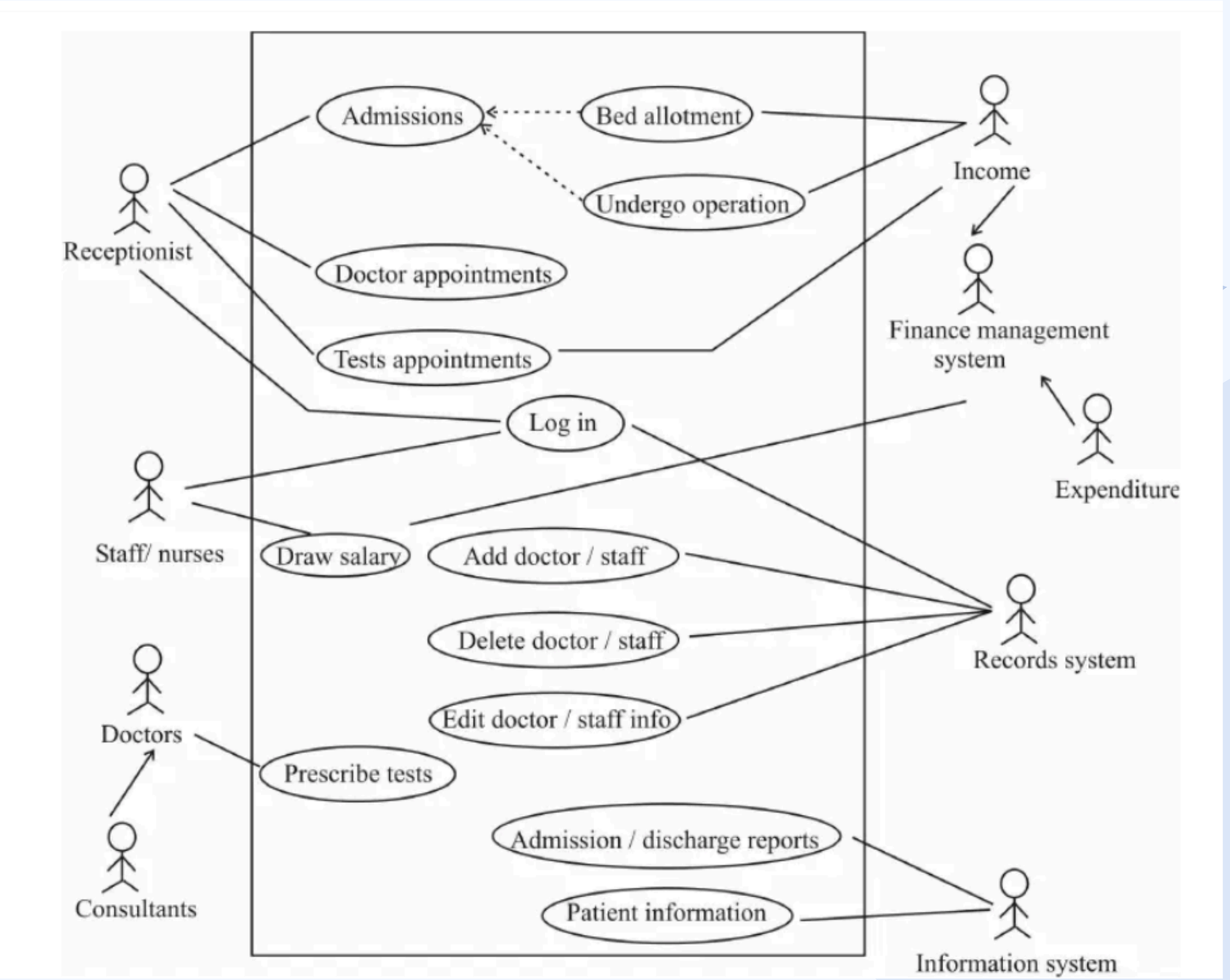
Data base Technology:

Mongo Db

Backend technology :

java

Design and Architecture (MVC)



Features and Functionality

1. **Admin Features and Functionality**
   - User & Role Management: Admin can manage user accounts (patient, doctor, staff), assign roles, and reset passwords.
   - Doctor Management: Admin can add/edit/remove doctors, manage schedules, and assign patients.
   - Patient Management: Admin can manage patient profiles and medical records.
   - Appointment Management: Admin oversees all appointments and reschedules when necessary.
   - Billing & Financials: Generate patient bills, track payments, and handle insurance.
   - Reports & Analytics: Generate performance reports, patient statistics, and financial reports.
   - System Settings: Admin can configure system settings and backup data.

2. **Doctor Features and Functionality**
   - Patient Management: View/edit patient profiles, medical records, and treatment history.
   - Appointment Management: View/confirm/reject appointments, reschedule if needed.
   - Prescription Management: Write prescriptions, track medications, and access medication databases.
   - Consultation & Reports: Record patient consultations and generate treatment reports.
   - Communication with Patients: Send appointment reminders, messages, and follow-up notifications.

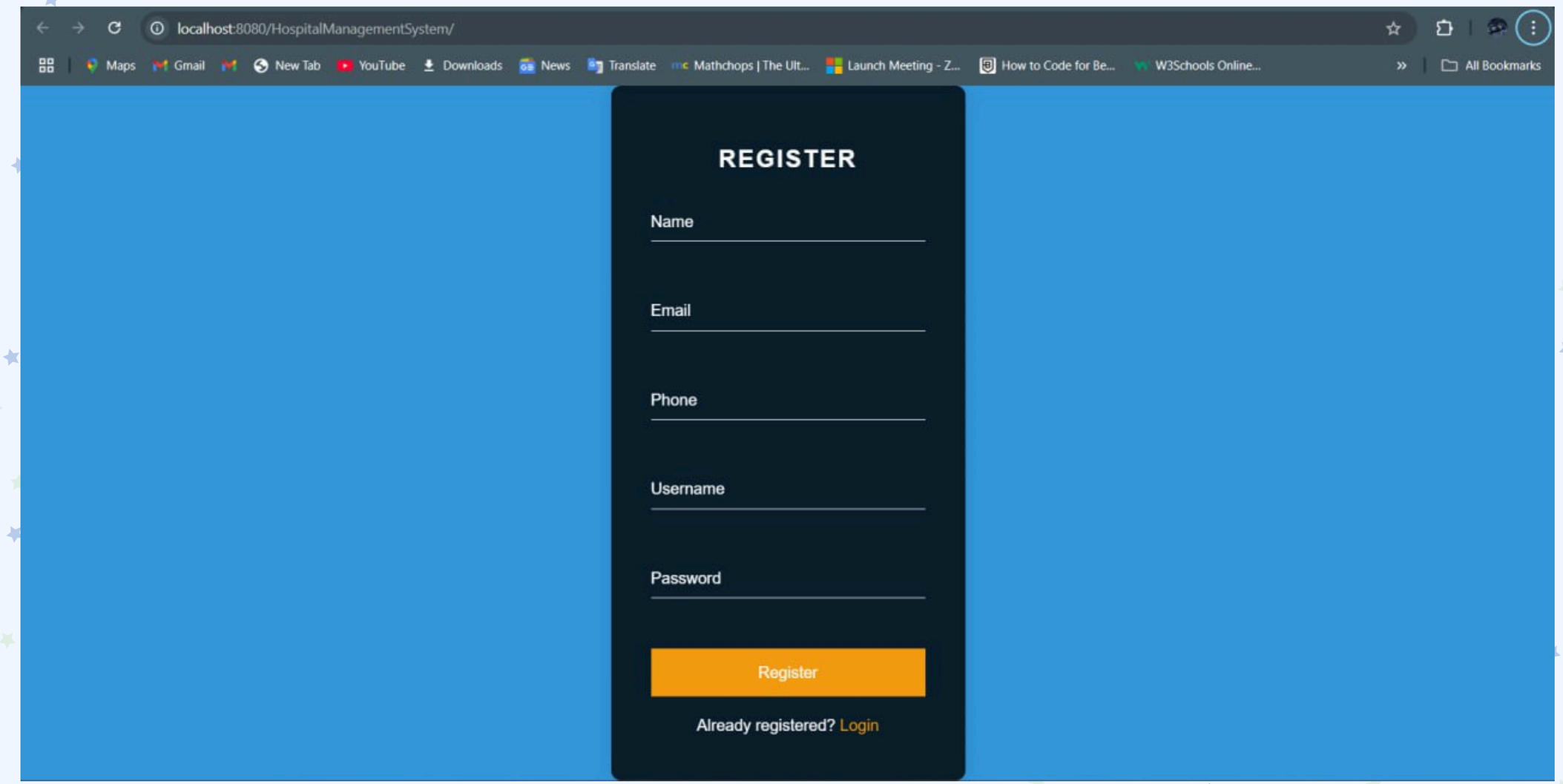
Features and Functionality

3. **User (Patient) Features and Functionality**
   - Profile Management: Register, update personal details, and track medical history.
   - Appointment Booking: Search doctors, book/reschedule appointments, and track status.
   - Medical Records: Access test results, consultation history, and prescriptions.
   - Billing & Payments: View bills, make payments, and manage insurance.
   - Notifications & Reminders: Receive appointment and medication reminders.
   - Feedback: Rate doctors and provide hospital service feedback.

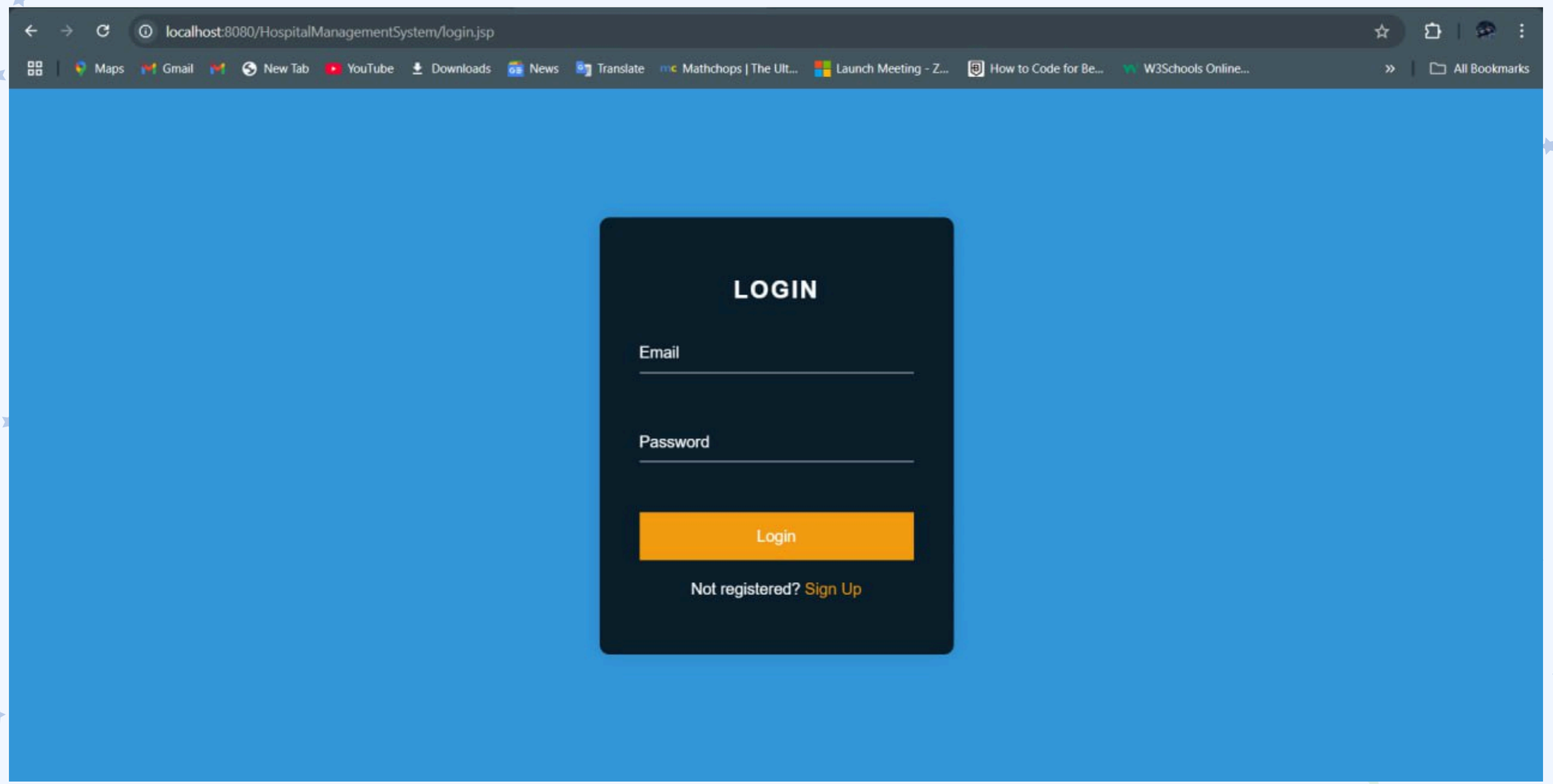
Development workflow

1. **Setup Development Environment**
   - Install Eclipse IDE for Java EE development.
   - Install MongoDB and set up a local database.
   - Add MongoDB Java Driver to the project (via Maven or manual .jar files).
2. **Project Structure in Eclipse**
   - WebContent: Store HTML, CSS, and JSP/Servlets.
   - src: Store Java classes (e.g., servlets, data models).
   - lib: Store external libraries like MongoDB Java Driver.
3. **MongoDB Integration**
   - Create a utility class for database connection.
   - java
   - CopyEdit
   - MongoDatabase getDatabase() {
   - return new MongoClient("localhost", 27017).getDatabase("HospitalDB");
   - }
   - Use MongoDB to store and retrieve hospital data (e.g., patient records).
4. **Create Java Servlets**
   - Handle client requests (GET/POST) and interact with MongoDB.
   - Example: Fetch patient data:
   - java
   - CopyEdit
   - MongoCollection<Document> collection = database.getCollection("patients");
   - Document patient = collection.find().first();
5. **HTML & CSS for Frontend**
   - HTML for the user interface.
   - CSS for styling.
   - html
   - CopyEdit
   - <h1>Welcome to Hospital Management System</h1> Click below to view patient details: <a href="patients">View Patient</a>
   - CSS for page styling:
   - css
   - CopyEdit
   - body { font-family: Arial, sans-serif; background-color: #f4f4f4; }
   - h1 { color: #333; }
6. Deploy and Test
   - Run the project on Apache Tomcat.
   - Test data retrieval from MongoDB and ensure proper front-end display.

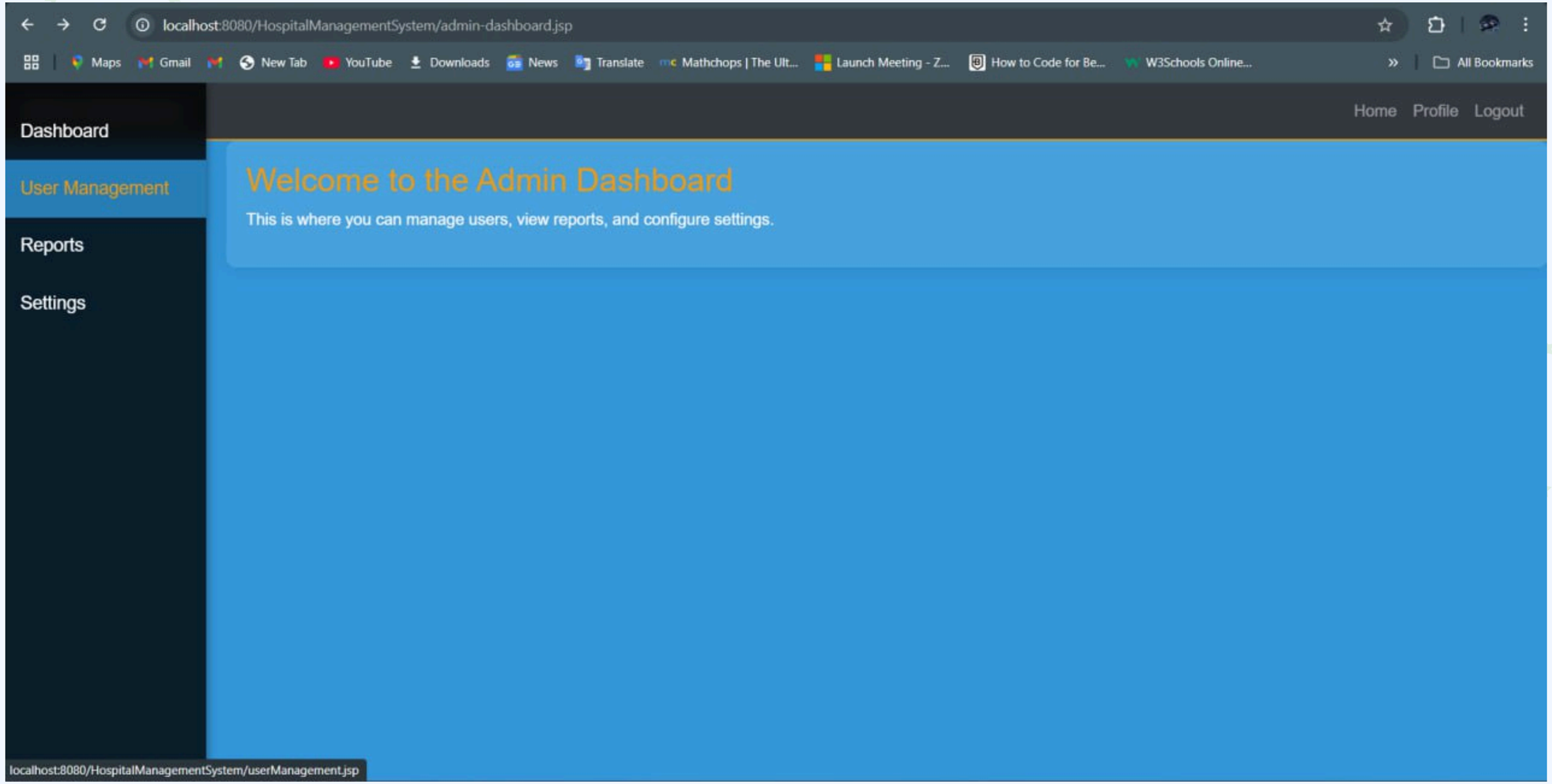
Register page



Login


localhost:8080/HospitalManagementSystem/login.jsp
Maps
Gmail
New Tab
YouTube
Downloads
News
Translate
Mathchops | The Ult...
Launch Meeting - Z...
How to Code for Be...
W3Schools Online...
All Bookmarks
LOGIN
Email
Password
Login
Not registered? Sign Up

Admin Dashboard



Role and contribution of the team members

Shivani Reddy~2310030313

Team lead and developing the front-end and uml designer

Snehitha Bairi~2310030023

Front-end developer and tester

Nilesh Reddy~2310030017

Backend developer

Yakshith Reddy~2310030219

Backend developer

Ritish~2310030373

Data base administrator

Thank you