

Hospital Management System Project

Frontend (Angular + Bootstrap):-

Purpose:-

The frontend provides an interactive and responsive user interface for patients, doctors, and admins. It ensures smooth workflows for appointment booking, record access, billing, and overall hospital management, with role-based views.

Core Frontend Modules

1. Patient Portal

- **Registration & Login** using JWT authentication
- Book appointments with doctors in real-time
- View and download prescriptions
- Access personal medical history and records
- Receive instant notifications (SMS/Email through backend services)

2. Doctor Dashboard

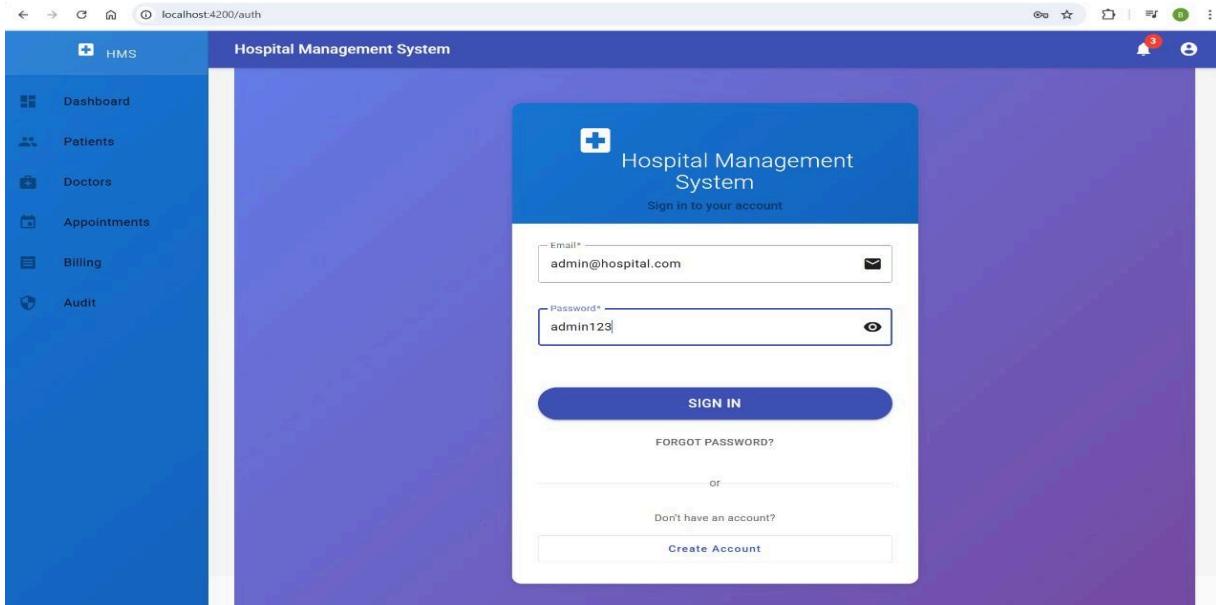
- Secure doctor login with role-based access
- Manage appointments and view assigned slots
- Update diagnoses and prescriptions directly into the system
- Track patient medical history for continuity of care
- Manage daily and weekly schedules efficiently

3. Admin Dashboard

- Manage doctors, patients, departments, and room allocations
- Oversee and adjust appointment scheduling
- Generate bills and handle insurance claims
- Access reports and maintain audit logs
- Monitor overall hospital activities in real-time

Frontend Features & Best Practices

- **Responsive UI** → Bootstrap ensures the application adapts across devices (desktop)
- **Role-Based Access** → Patients, doctors, and admins see different dashboards tailored to their needs.
- **Pagination** → Large sets of data (e.g., medical records, billing history) are handled efficiently.
- **Security** → JWT tokens secure authentication and authorization.
- **Event-Driven Updates** → Real-time UI updates through Kafka-driven backend events.
- **Audit-Friendly Design** → Frontend supports logging and compliance with healthcare regulations.



Login-Page

A screenshot of the Hospital Management System dashboard. The URL in the address bar is "localhost:4200/dashboard". The dashboard features a top banner with the text "Welcome to Hospital Management System" and "Here's what's happening today". Below the banner are four summary cards: "1,247 TOTAL PATIENTS +12%", "89 ACTIVE DOCTORS +5%", "156 TODAY'S APPOINTMENTS +23%", and "\$45,678 REVENUE (MONTHLY) +18%". The main content area includes sections for "Recent Appointments" (listing five entries with columns for Patient, Doctor, Time, and Status) and "Department Overview" (showing occupancy rates for Cardiology, Neurology, Orthopedics, and Pediatrics). A sidebar on the left lists the same navigation items as the login page: Dashboard, Patients, Doctors, Appointments, Billing, and Audit.

Home-Page

Hospital Management System

Patient Management

Manage patient records and information

+ ADD NEW PATIENT

ID	Name	Age	Gender	Phone	Email	Status	Actions
1	John Doe O+	35 yrs	Male	1234567890	john@example.com	Active	⋮
2	Jane Smith A+	28 yrs	Female	9876543210	jane@example.com	Active	⋮
3	Mike Wilson B+	42 yrs	Male	5551234567	mike@example.com	Inactive	⋮
4	Sarah Davis AB+	31 yrs	Female	4449876543	sarah@example.com	Active	⋮

Items per page: 5 0 of 0 < < > >

Patient-Page

Hospital Management System

Doctors Management

Manage doctor profiles and specializations

+ ADD DOCTOR

ID	Name	Specialty	Contact	Status	Actions
1	Dr. Brown	Cardiology	abt@example.com	Active	⋮
2	Dr. Lee	Dermatology	def@example.com	Inactive	⋮
3	Dr. Johnson	Pediatrics	ghi@example.com	Active	⋮
4	Dr. Clark	Orthopedics	jki@example.com	Active	⋮

Items per page: 5 1 of 4 < < > >

Doctor-Page

The screenshot shows the 'Appointments Management' section of the Hospital Management System. The left sidebar has a blue background with white icons and text for Dashboard, Patients, Appointments (which is highlighted in yellow), Billing, and Audit. The main content area has a white background with a dark blue header bar containing the system name 'Hospital Management System' and a user icon. Below the header is a title 'Appointments Management' with a subtitle 'Schedule and manage patient appointments'. A blue button '+ ADD APPOINTMENT' is in the top right. A search bar 'Search Appointments' with a magnifying glass icon is followed by 'Filter' and 'Export' buttons. A table lists four patient appointments with columns for ID, Patient, Doctor, Date, Time, Status, and Actions. The first appointment is 'Scheduled', the second is 'Cancelled', the third is 'Scheduled', and the fourth is 'Completed'. At the bottom are pagination controls for items per page (5), page 1 of 4, and navigation arrows.

ID	Patient	Doctor	Date	Time	Status	Actions
1	John Doe D+	Dr. Brown	15/03/2024	10:00 AM	Scheduled	⋮
2	Jane Smith A+	Dr. Lee	16/03/2024	11:00 AM	Cancelled	⋮
3	Mike Wilson B+	Dr. Johnson	16/03/2024	02:00 PM	Scheduled	⋮
4	Sarah Davis AB	Dr. Clark	17/03/2024	09:00 AM	Completed	⋮

Appointments-Page

The screenshot shows the 'Billing Management' section of the Hospital Management System. The left sidebar has a blue background with white icons and text for Dashboard, Patients, Doctors, Appointments (highlighted in yellow), Billing, and Audit. The main content area has a white background with a dark blue header bar containing the system name 'Hospital Management System' and a user icon. Below the header is a title 'Billing Management' with a subtitle 'Generate invoices and track payments'. A blue button '+ ADD INVOICE' is in the top right. A search bar 'Search Invoices' with a magnifying glass icon is followed by 'Filter' and 'Export' buttons. A table lists four invoices with columns for ID, Patient, Amount, Status, and Actions. The first two invoices are 'Paid', the third is 'Scheduled', and the fourth is 'Pending'. At the bottom are pagination controls for items per page (5), page 1 of 4, and navigation arrows.

ID	Patient	Amount	Status	Status	Actions
1	John Doe O+	\$200.00	Paid	Paid	⋮
2	Jane Smith	\$300.00	Unpaid	Unpaid	⋮
3	Mike Wilson	\$150.00	Paid	Scheduled	⋮
4	Sarah Davis	\$400.00	Pending	Pending	⋮

Billing-Page

The screenshot shows a web-based application titled "Hospital Management System" (HMS) running on localhost 4200/audit. The interface includes a sidebar on the left with icons for Dashboard, Patients, Doctors, Appointments, Billing, and Audit. The Audit item is currently selected. The main content area is titled "Audit Logs" and contains a search bar labeled "Search Invoices". Below the search bar is a table with four columns: ID, Timestamp, User, and Action. The table displays four log entries:

ID	Timestamp	User	Action
1	03/03/2023 - 02:16 PM	Admin	Logged In
2	02/03/2023 - 02:32 PM	John Doe	Booked Appointment
3	02/03/2023 - 02:32 PM	Jane Smith	Payment Processed
4	03/03/2023 - 17:44	Admin	Billing Updated

At the bottom right of the table, there are pagination controls: "items per page: 5" with a dropdown arrow, "1 of 4", and navigation arrows.

Audit-Page