

# 🏥 Health Care Management System - Application Architecture

Current Implementation: React + Node.js + PostgreSQL + Docker

## 👤 Users & Access Points

👨⚕️ **Doctors**  
Medical Staff

👤 **Patients**  
Healthcare Seekers

👤👤 **Admin**  
System Admin

🌐 **Web Browser**  
Access Method

HTTPS  
Requests

### 🌐 Frontend Layer (React)

- React 18 + TypeScript
- Redux Toolkit (State)
- Tailwind CSS (Styling)
- React Router (Navigation)
- Vite (Build Tool)

REST API  
Calls

### 🖥️ Backend Layer (Node.js)

- Node.js 20 + Express
- Prisma ORM
- JWT Authentication
- RESTful APIs
- TypeScript

### 🔗 API Endpoints (Current Implementation)

/api/auth/\* - Authentication & Registration  
/api/doctors/\* - Doctor Management & Listings  
/api/appointments/\* - Appointment Booking & Management

Prisma ORM  
SQL Queries

## 🗄️ Database Layer (PostgreSQL)

**Users**  
Authentication  
User Profiles

**Doctors**  
5 Specialists  
Departments

**Appointments**  
Booking System  
Scheduling

**Departments**  
Medical Depts  
Specializations

## 🐳 Docker Container Architecture

**Nginx**  
:80/443

**Frontend**  
:5173→80

**Backend**  
:3002

**Database**  
:5432

## 🔧 Current Implemented Features

- 👤 User Authentication (Registration, Login, JWT)
- 👨⚕️ Doctor Management (5 Specialists, Search, Filter)
- 📅 Appointment System (Booking UI, Management, APIs)
- 🏥 Healthcare Services (Cardiology, Neurology, Orthopedics, etc.)
- 🐳 Docker Deployment (4 Containers, Health Monitoring)