



# DOC NEXUS

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# INTRODUCTION

The Full Stack Appointment Booking System is a web-based application designed for doctors and hospitals to efficiently manage patient appointments. This system enhances healthcare management by streamlining the appointment process, improving doctor-patient interactions, and ensuring a seamless user experience for all stakeholders.

## KEY FEATURES:

- Patient Portal
- Doctor Dashboard
- Admin Panel
- System Functionalities

## BENEFITS:

- Convenience & Accessibility
- Time Efficiency
- Better Appointment Management
- Improved Patient Experience



# LITERATURE REVIEW

- ✓ **Efficiency & Accessibility:** Reduces workload and enhances patient scheduling.
- ✓ **Technological Framework:** Uses front-end (React.js), back-end (Node.js), and databases (MongoDB).
- ✓ **Advantages:** Improves healthcare resource utilization.
- ✓ **Challenges:** Digital literacy barriers, system downtime, and data privacy concerns.
- ✓ **Future Trends:** AI-driven scheduling, blockchain security, chatbots, and telemedicine integration.

# OBJECTIVES

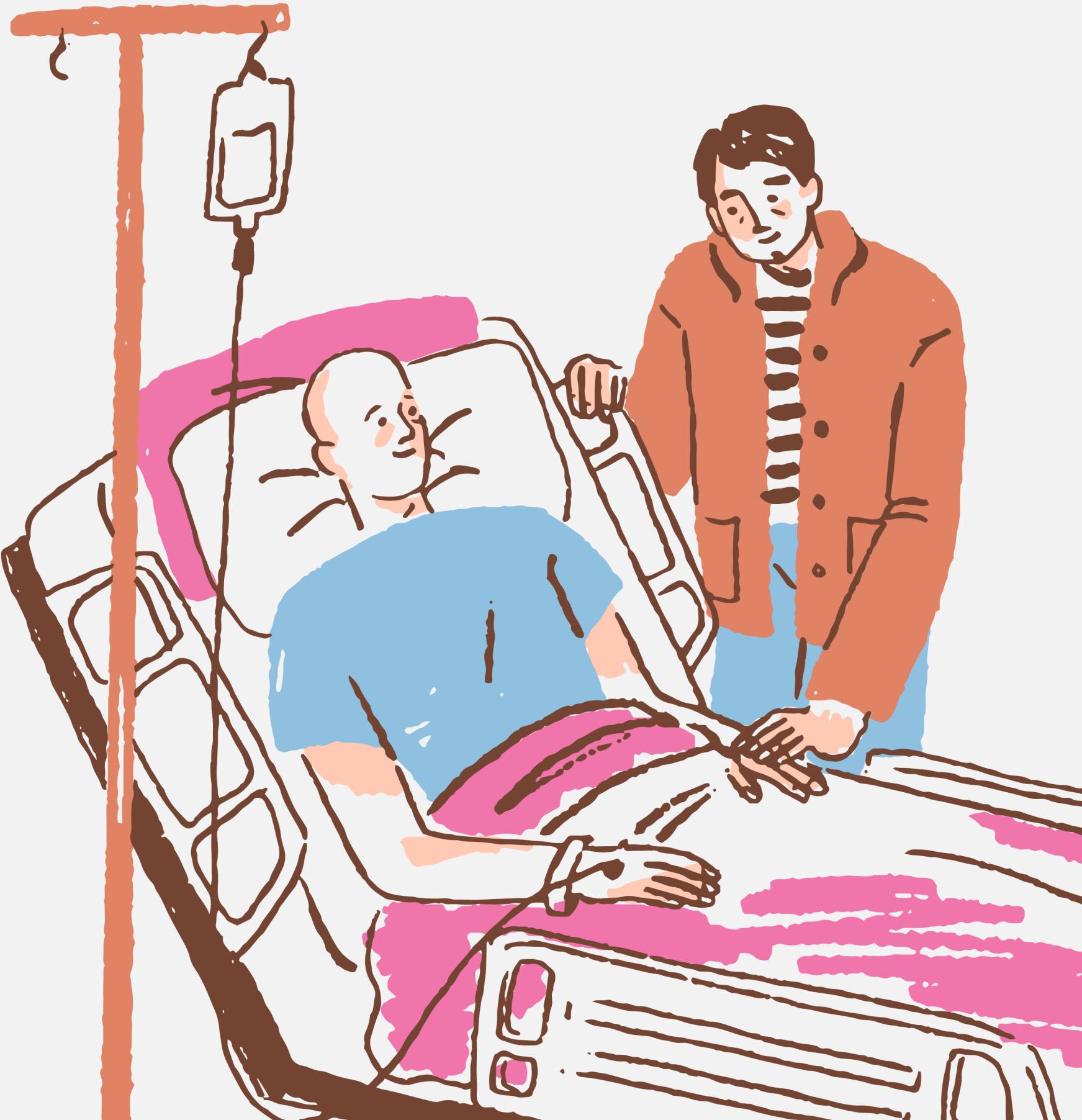
## Multi-Platform Accessibility

Provide a seamless experience across web and mobile platforms.

## Efficient Scheduling System

Develop a user-friendly appointment scheduling system that minimizes manual workload and improves accessibility.





## Resource Optimization

Improve healthcare resource efficiency through automated reminders and optimized scheduling

## Real-Time Communication

Enable real-time communication between doctors and patients through integrated messaging and notification features.

# TECHNOLOGY :

## HARDWARE :

### Development Environment

Personal Computers/Laptops -

Minimum specifications:

- Processor: Intel i5 or equivalent
- RAM: 8 GB or more
- Storage: 256 GB SSD or higher

### Client Requirement

POS Terminals/Tablets

Minimum specifications:

- Processor: Intel i3 or equivalent
- RAM: 4GB or more
- Storage: 128 GB SSD or higher

## SOFTWARE:

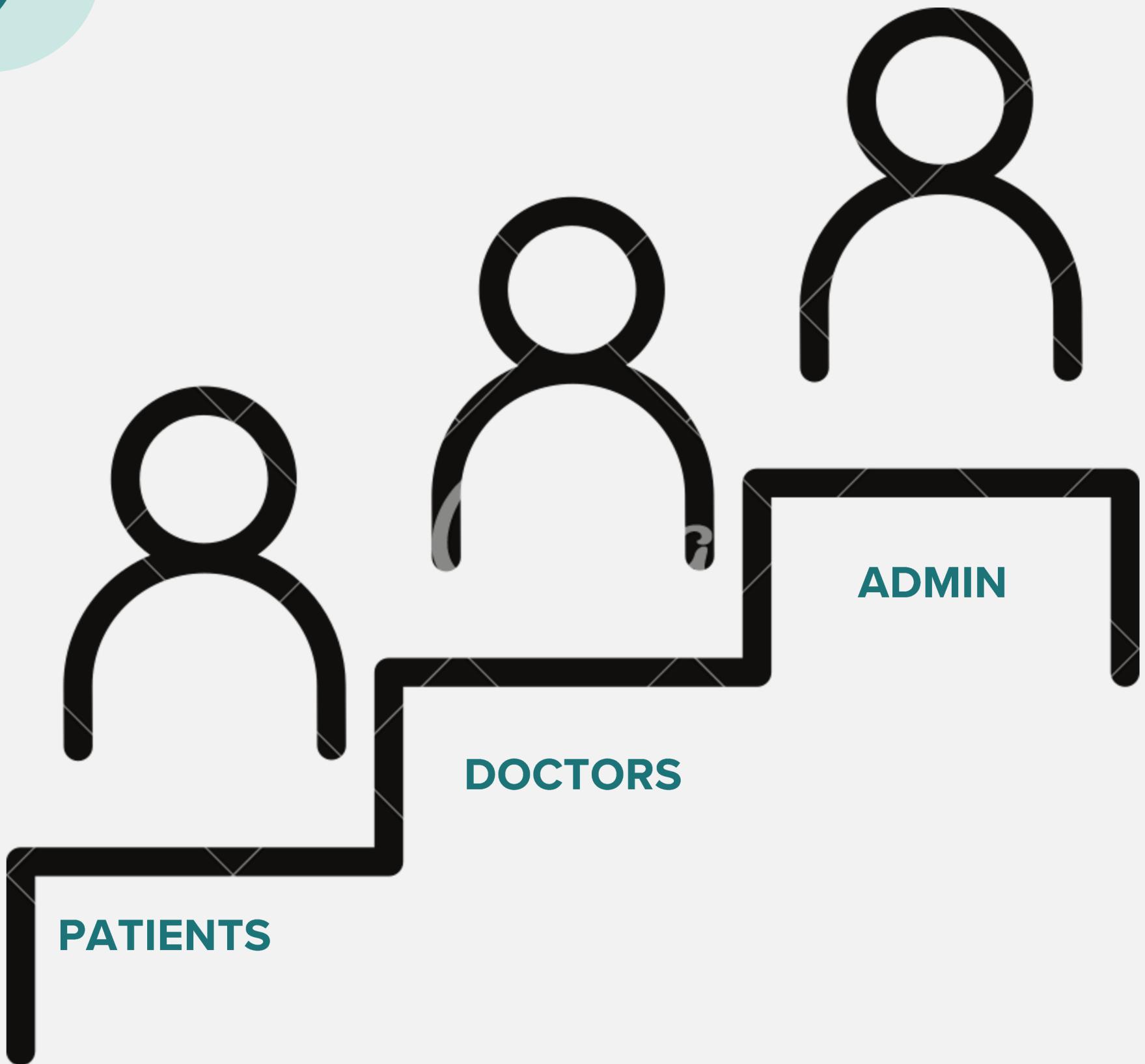
### Programming Languages and Frameworks

- HTML/CSS/Javascript
- React JS
- Express and Node JS
- MongoDB

### Development Tools

- Visual Studio Code

# Three Level Authentication



**PATIENT:** 1st one is for patients so that , patient can login on the website , book appointment with doctor and manage the appointment.

**DOCTOR:** 2nd one is for doctor login, so that doctor can login and check their appointments and earnings.

**ADMIN DASHBOARD:** 3rd one is Admin Dashboard where admin can manage the appointment and admin can also manage the doctor profile.

# WORKFLOW

WEBSITE

PAT.

DOC.

ADMIN

- PROFILE
- APPOINTMENT

- PROFILE
- APPOINTMENT
- REPORT

MANAGE  
PAT. AND  
DOC.  
DATA

# MODULES

**Authentication  
and  
Authorization**

**Patient-side  
Interface**

**Doctor-side  
Interface**

**Admin-side  
Interface**

# AUTHENTICATION AND AUTHORIZATION

- Implementing the three levels of login: Patients, Doctors, and Admins.
- Role-based access control and session management.
- JWT or any token-based authentication system.
- Key tasks: login, registration, role management.



# PATIENT-SIDE INTERFACE

- Booking appointments with doctors.
- Managing appointments (view, cancel, reschedule).
- Implementing the appointment calendar.
- Integrating payment gateways for booking payments.



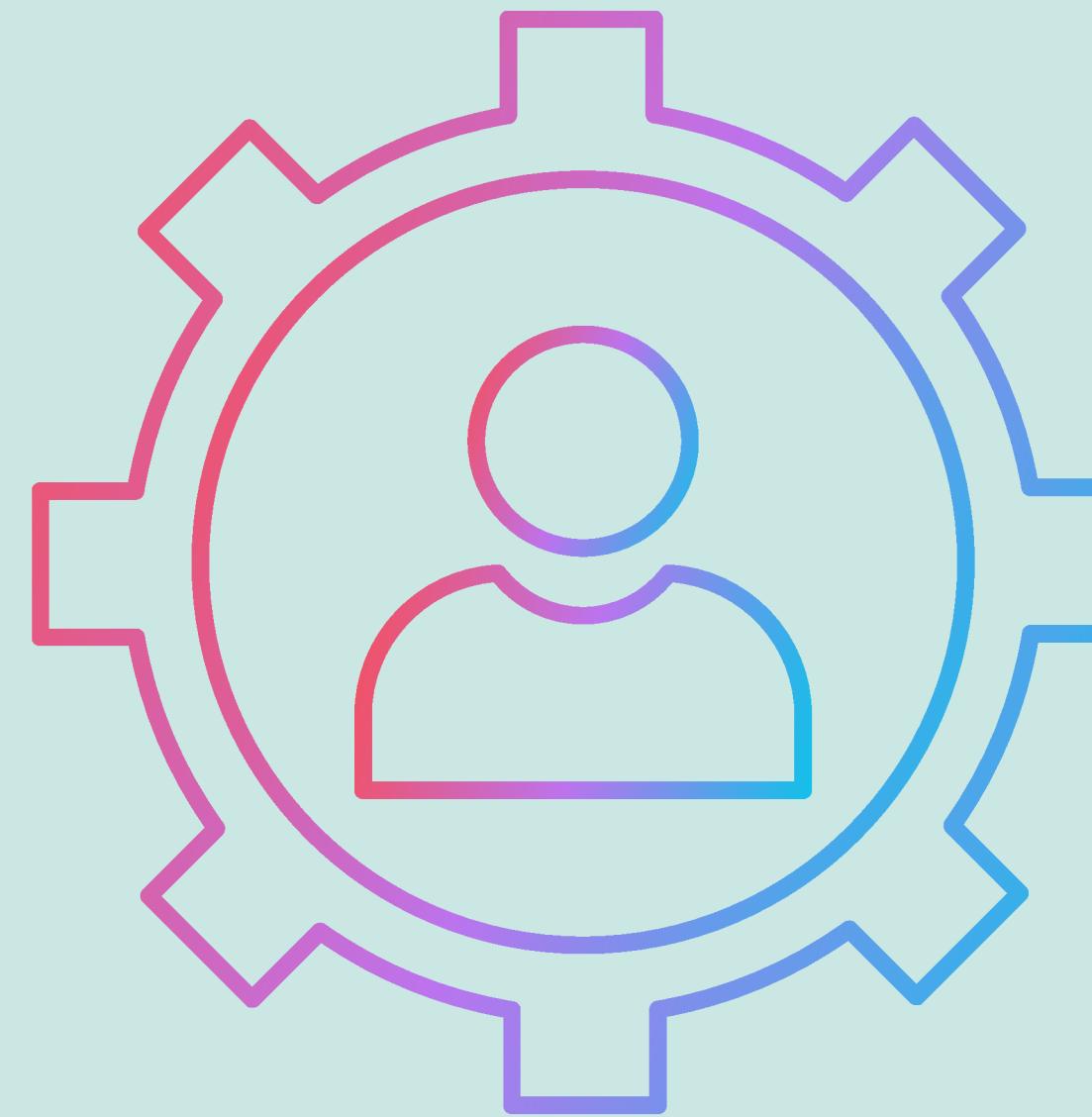
# DOCTOR-SIDE INTERFACE

- Managing appointments and profile.
- Displaying earnings and appointment schedules.
- Updating personal and professional details (profile).
- Handling doctor-specific tasks (confirm/reject appointments).



# ADMIN-SIDE INTERFACE

- Managing doctors, patients, and appointments.
- Approving or rejecting doctor registrations.
- Managing user data and generating reports (earnings, appointments, etc.).
- Handling any system-level configurations.



# REPORTS TO BE GENERATED

## 1. Total Appointments:

- Provides the count of all appointments booked across the platform.
- Helps in understanding patient engagement and system usage.

## 2. Total Earnings:

- Aggregates the total earnings from all the appointments booked via the platform.
- Useful for both doctors and the admin to track revenue generated over time.

## 3. Appointments per Doctor:

- Displays the number of appointments handled by each doctor.
- Doctors can use this to monitor their individual performance.
- Admin can manage doctor availability and load distribution.



Thank  
you