

# Smart Appointment & Queue Manager

Build a web application to manage **service appointments**, **staff availability**, and **customer queues**, with conflict handling.

## 1. Authentication

### User Login & Signup

- Users can **register and log in**.
- Email + Password
- After login, redirect to Dashboard
- Demo user login button with credentials

## 2. Staff & Service Setup

### Staff

- Users can create staff members **manually** (no email needed)..

Each staff member has:

- Name
- Service Type (e.g., Doctor, Consultant, Support Agent)
- Daily Capacity (max appointments per day: 5)
- Availability Status: Available / On Leave

### Services

Users can define services:

- Service Name (e.g., Consultation, Check-up)
- Duration (15 / 30 / 60 minutes)
- Required Staff Type

## 3. Appointment Management

Users can:

- Create appointments
- Edit or cancel appointments
- View appointments by date or staff member

Each appointment includes:

- Customer Name
- Service
- Assigned Staff
- Appointment Date & Time
- Status:
  - Scheduled
  - Completed
  - Cancelled
  - No-Show

## 4. Appointment Assignment Rules

When assigning staff:

Show each eligible staff member as:

Farhan (3 / 5 appointments today)

If staff exceeds daily capacity, show warning:

Farhan already has 5 appointments today.

If no staff is available:

- Appointment goes into **Waiting Queue**

## 5. Waiting Queue Management

Appointments without staff go into a **Waiting Queue**.

Queue rules:

- Ordered by appointment time
- Show queue position (1st, 2nd, 3rd...)

When a staff becomes available:

- User can click **Assign From Queue**
- The earliest eligible appointment is assigned automatically

## 6. Conflict Detection

When creating or editing appointments:

- Detect time conflicts for the same staff
- Show message:  
This staff member already has an appointment at this time.

Options:

- Pick another staff
- Change time

## 7. Dashboard

Display:

- Total Appointments Today
- Completed vs Pending
- Waiting Queue Count

Staff Load Summary:

Riya — 4 / 5 (OK)

Farhan — 5 / 5 (Booked)

## 8. Activity Log

Track important actions:

- Queue → Staff assignments
- Show latest 5-10 logs.

Example:

11:45 AM — Appointment for “John Doe” auto-assigned to Riya.

12:10 PM — Appointment moved from queue to Farhan.

### **Important Note**

- **Technology Stack:** You are free to use any frontend and backend technology stack to complete this task.
- **Deployment:** The project must be deployed and accessible via a live URL.