Clinic Appointment System

Objective

Build a clinic system where **patients book appointments**, **receptionists manage scheduling**, and **doctors manage consultations**, with correct **permissions, scheduling rules, and workflows**.

Roles

1. **Patient**

   - Register/login

   - View/update own profile

   - Book available appointment slots

   - View own appointments (upcoming/history)

   - Cancel (with policy) + request reschedule

   - View consultation summary after completion (read-only)

2. **Doctor**

   - View own schedule + daily queue

   - Confirm/decline appointment requests

   - Mark checked-in/completed/no-show

   - Fill consultation record (notes, diagnosis, prescription, tests)

3. **Receptionist**

   - Manage doctor schedules (availability + exceptions)

   - Confirm bookings (if clinic policy)

   - Check-in patients + manage queue order

- ● Reschedule on behalf of patient

- ● Cannot access medical notes

4. **Admin**

   ○ Manage users/roles

   ○ View analytics dashboard + export CSV

Required Features (MUST)

1) Doctor Availability + Slot Generation

- ● Weekly schedule per doctor (day, start, end)

- ● Exceptions: vacation/day off + one-off working day

- ● Slot generation based on session duration (15/30 min)

2) Booking + Conflict Rules

- ● Patient can book **only available slots**

- ● Prevent:

  ○ Double booking for same doctor/time

  ○ Overlapping appointments for the same patient

- ● Add **buffer time** before/after (configurable, default 5 min)

3) Appointment Lifecycle

Statuses:
REQUESTED → CONFIRMED → CHECKED_IN → COMPLETED
and CANCELLED / NO_SHOW

Rules:

- ● Patient can cancel only if status is REQUESTED/CONFIRMED

- ● Doctor or receptionist can mark NO_SHOW

- ● COMPLETED requires consultation record completed

4) Rescheduling + Audit Trail

- ● Reschedule request by patient OR staff

- ● Must keep history:

  - ○ old datetime, new datetime, changed by, reason, timestamp

5) Queue / Check-in

- ● Receptionist checks-in patients

- ● Doctor dashboard shows today queue ordered by check-in time

- ● Show waiting time (simple: now - check-in time)

6) EMR Lite (Consultation Record)

- ● For COMPLETED appointments:

  - ○ diagnosis, notes

  - ○ prescription items (drug, dose, duration)

  - ○ requested tests

- ● Patient can view summary, not edit

- ● Receptionist cannot see medical notes

7) Search & Filters

- ● Appointment list filters:

- status, date range, doctor, patient (staff only)

- Search by appointment id or patient name (staff only)

Bonus Features

- Waiting list + auto-fill on cancellation (hold 30 mins)

- Payment simulation + refund policy + invoice PDF

- Telemedicine type (online link + file sharing)

- Analytics dashboard (no-show rate, peak hours, revenue)

- DRF API for appointments + slots

- Unit tests > 12 with coverage report

Technical Constraints

- Use Django authentication + groups/permissions

- Use class-based views if reasonable

- Use database constraints to enforce unique slot booking

- You Use transactions in booking/rescheduling

Submission

1. GitHub repo link

2. README: setup, sample users (patient/doctor/receptionist/admin), how to test main flows

3. Tests: run command + evidence (screenshots or CI)

General notes

- Group members up-to 5 per team
- Beautiful design is a must (You can use AI to do this task)
- You must complete the follow.
- Admin dashboard should be implemented (Don't use the built-in one),

Best of luck ^^
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