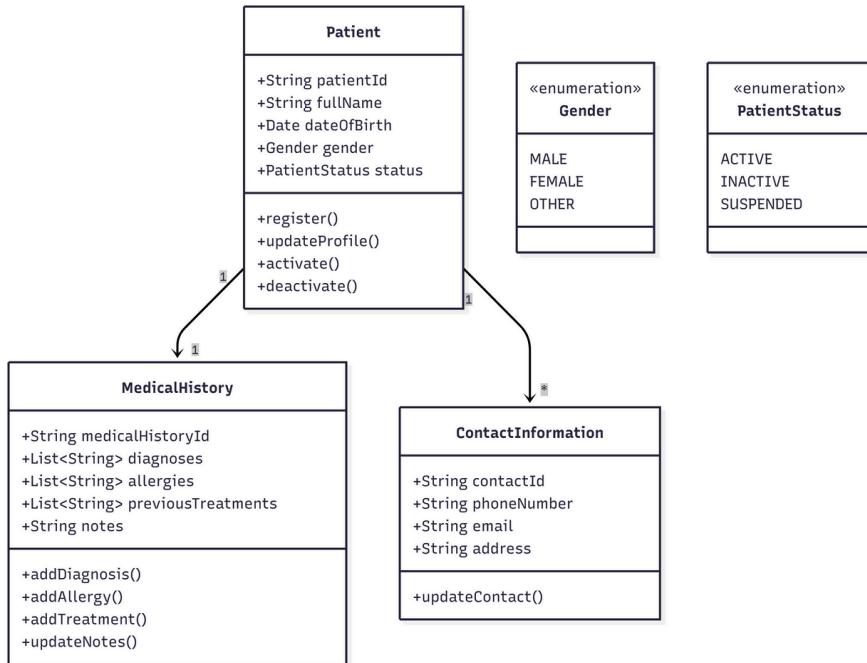


Class Diagram Of Each Bounded Context

1. Patient Bounded Context

The Patient context is the core repository of clinical truth within the system. It handles identity, medical history, and clinical observations.

1.1 Tactical Design & Class Diagram Analysis

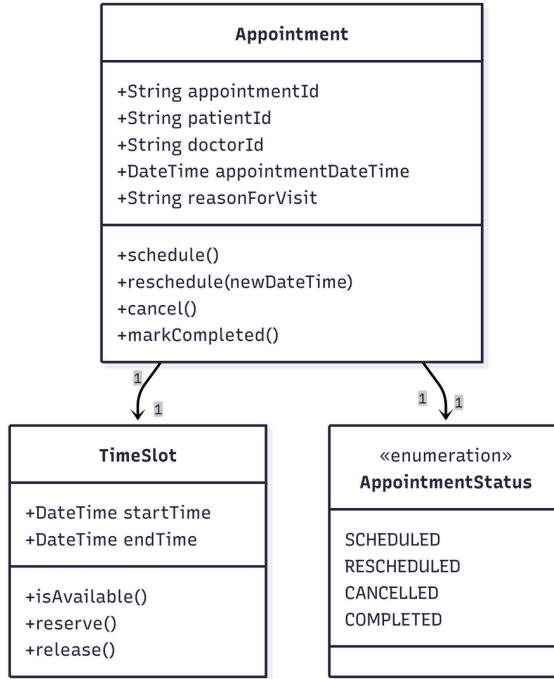


As shown in the diagram, the **Patient** serves as the **Aggregate Root**. Any modification to clinical notes or vitals must be performed through the Patient aggregate to ensure consistency.

2. Appointment Bounded Context

The Appointment context manages the orchestration of time, resources, and clinical staff availability.

2.1 Tactical Design & Class Diagram Analysis



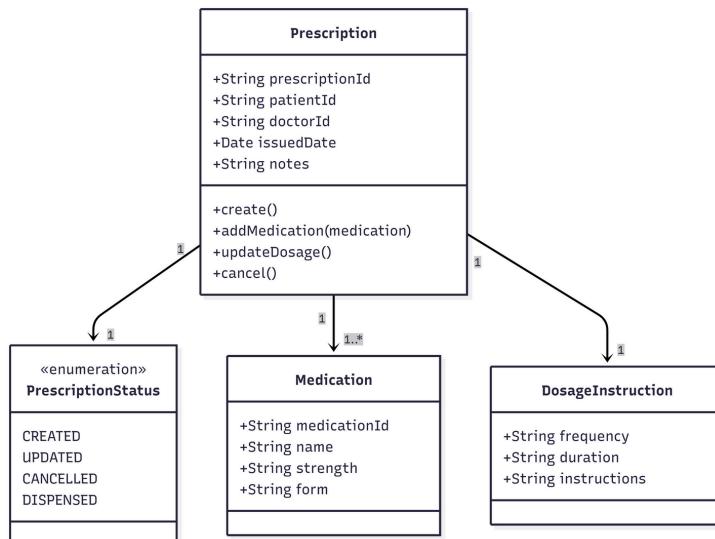
The **Appointment** aggregate root defines the consistency boundary for scheduling.

- **Invariants:** The domain logic ensures that no two appointments can overlap for the same DoctorId or RoomId.
- **Value Objects:** We use a **TimeSlot** Value Object to encapsulate the start and end times, providing built-in validation logic to prevent invalid durations.

3. Prescription Bounded Context

This context handles the lifecycle of medication orders, ensuring patient safety and regulatory compliance.

3.1 Tactical Design & Class Diagram Analysis



The **Prescription** Aggregate Root ensures that medication dosages and durations adhere to clinical standards.