

1. **Constraint:** Patients must have unique identifiers.

ocl

context Doctor

inv: self.appointments->forAll(a1, a2 | a1 <> a2 implies a1.endTime < a2.startTime)

2. **Constraint:** Appointments cannot overlap for the same doctor.

Ocl

context Patient

inv: self.appointments->forAll(a | a.date >= Date.today())

3. **Constraint:** Patients cannot have overlapping appointments.

ocl

context Resource

inv: self.available

4. **Constraint:** Appointment times must be in the future.

ocl

context Doctor

```
inv: self.appointments->select(a | a.date = Date.today())->size() <= 10
```

