Medical Laboratory Database

Aim: To design a well-normalized database to be used in real-world medical laboratories.

Software Used: PgAdmin4 v7

Language Used: PostgreSQL v 14.9

Database Design:

- Patients(PatientID, FirstName, LastName, DOB, Gender)
- Tests(TestID, TestName, Cost)
- Doctors(DoctorID, FirstName, LastName, Date_of_joining, Designation)
- Bookings(BookingID, TestID, PatientID, DoctorID, Date)
- Testresults(ResultID, BookingID, status, report)

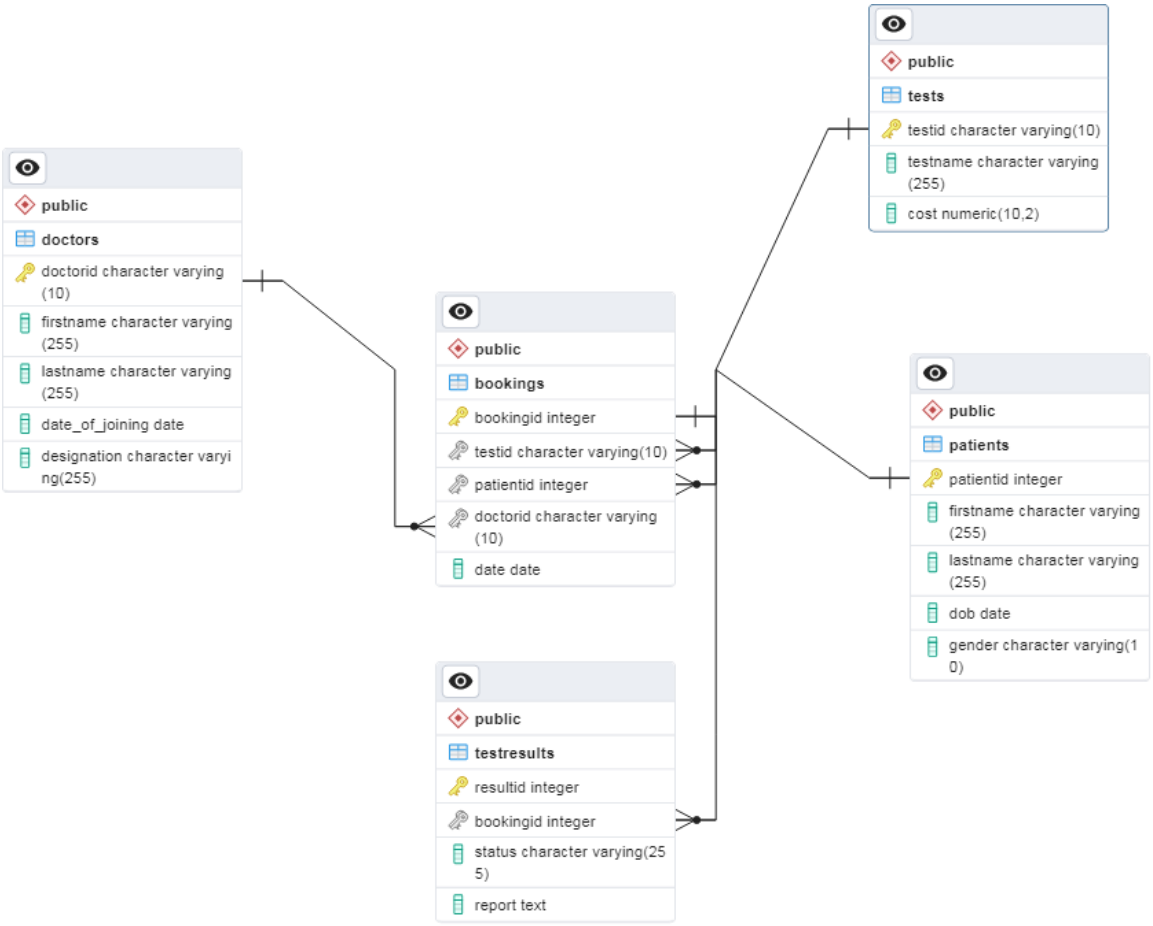
If we closely observe, there are no partial dependencies and transitive dependencies, hence the given database is in 3NF (3rd Normal Form)

Cascades:

- **On delete** cascade for a patient, if they decide to delete their data from the laboratory. The cascade will be on Bookings.
- **On delete** cascade for a booking, if a patient cancels the booking, the test result also gets cancelled. The cascade will be on Testresults.
- **NO on update** cascades required as ID unchangeable once set.

Triggers:

- A Statement Level Trigger for every booking, a new test result row gets appended.


public
doctors
doctorid character varying (10)
firstname character varying (255)
lastname character varying (255)
date_of_joining date
designation character varying(255)
public
bookings
bookingid integer
testid character varying(10)
patientid integer
doctorid character varying (10)
date date
public
tests
testid character varying(10)
testname character varying (255)
cost numeric(10,2)
public
patients
patientid integer
firstname character varying (255)
lastname character varying (255)
dob date
gender character varying(10)
public
testresults
resultid integer
bookingid integer
status character varying(255)
report text