Homework: queries in SQL language

1. **Given the following relational schema (primary keys are underlined, optional attributes are indicated with *):**

JUDGE (SSN, Name, Surname, BirthDate)
COURT (CodCourt, CourtName, City)
COURTROOM (CodCourt, CodRoom, RoomName)
LAWSUIT (CodLawsuit, LawsuitType, StartDate, EndDate*, SSN)
COURT-HEARING (CodCourt, CodRoom, Date, StartTime, EndTime, CodLawsuit)

Express the following queries in SQL language:

a. For each judge who has never presided over any defamation lawsuit (LawsuitType = 'Defamation') in the year 2020, show SSN, surname and number of different types of lawsuits he has presided over.
b. Considering the lawsuits still pending and presided over by a judge who, overall over the course of his career, has presided over court hearings in at least three different courts, show the code of each lawsuit and the date of the last court hearing held for the cause.
c. Show name, surname and birthdate of each judge who has presided over court hearings in *every* court, in which (i.e. in each of which) at least 50 divorce lawsuits (LawsuitType = 'Divorce'). have been discussed.

2. **Given the following relational schema (primary keys are underlined, optional attributes are indicated with *):**

TRAINER (SSN, NameT, Surname, City)
GYM (CodG, NameG, Address, City)
SPECIALTY (CodS, NameS, Description)
LESSON (SSN, CodG, Date, CodS, ParticipantsNumber)

Express the following queries in SQL language:

a. For each gym in Turin in which Judo lessons (NameS="Judo") have been given by at least 5 different trainers, but no yoga lessons have ever been given (NameS="Yoga"), show the name of the gym and the number of different trainers who have given lessons (considering each specialty, not judo only) there.
b. For each trainer who has given *only* Yoga lessons, show the name, the surname, and the city of the gym where he has given the highest number of lessons.
c. For each trainer who has trained in every gym in his city of residence, show name, surname, and number of specialties for which he has given lessons.