Databases
DBDMG - Politecnico di Torino
SQL (III)

Exercise 1. Given the following relations (primary keys are underlined):

```
SPECIALIST_VISIT (VCode, VType)
DOCTOR (DCode, DName)
PATIENT (SSN, PName, BirthDate)
BOOKING (Date, Time, DCode, Room, VCode, SSN)
```

express the following queries in SQL language:

(a) For patients who have booked at least three specialist visits with the same doctor in 2005, show the SSN, name and total number of bookings in November 2005.

(b) Show the SSN and name of the patients born after 1960 who have never booked any cardiologist visits.

Exercise 2. Given the following relations (primary keys are underlined):

```
CAR_RENTAL (CRCode, CRName, Address, City, Country)
CAR (NumberPlate, Model, Maker, Category, NumPassengers)
CUSTOMER (SSN, Name, Surname, DrivingLicense, CreditCard)
RENTAL_RESERVATION (RCode, SSN, ReservationDate, CRCode, StartDate, EndDate, Price,
NumberPlate)
```

express the following queries in SQL language:

(a) Show the name and surname of customers who have never made reservations for two Mercedes cars starting on the same day.

(b) For car rentals that received at least 30 rental reservation requests during November 2006, show the car rental code and name, and the total number of reservation requests received during the whole year 2006.

Exercise 3. Given the following relations (primary keys are underlined)

```
DRUG (DCode, Name, ActivePrinciple, Category, Maker)
PHARMACY (PCode, OwnerName, Address, City)
SALE (PCode, DCode, Date, Quantity)
```

express the following queries in SQL language:

(a) Show the name of the owner, address, and city of pharmacies that have never sold paracetamol drugs (`ActivePinciple = 'Paracetamol'`).

(b) For pharmacies that have sold a total quantity of drugs greater than the average quantity of drugs sold by all pharmacies, show the pharmacy code, the name of the owner, and the total quantity of Bayer drugs (`Maker = 'Bayer'`) sold during the whole year 2007.

Exercise 4. Given the following relations (primary keys are underlined)

```
BEACH (BeachAddress, BeachCity, Capacity, LifeguardInCharge)
LIFEGUARD (LID, FirstName, LastName, HomeCity, PhoneNumber)
RESCUE (RID, Lifeguard, BeachAddress, BeachCity, BatherSSN, Date, Reason)
BATHER (SSN, FirstName, LastName, DateOfBirth, HomeCity
```

express the following queries in SQL language:

(a) Show the identification code, the first name and the last name of lifeguards living in Ostuni who are not in charge of any beach and have accomplished at least two rescues on the same beach on the same day.

(b) Taking into account only the beaches located in cities that have at least 10 beaches whose capacity is greater than the average capacity of all beaches, show for each of such beaches the address, the city, and the number of distinct lifeguards who have performed rescues on that beach.

Exercise 5. Given the following relations (primary keys are underlined)

```
ATHLETE (ACode, AName, ASurname, TeamName, Country)
ATTENDANCE (CCode, ACode, Position)
COMPETITION (CCode, CName, CType, Category)
```

express the following queries in SQL language:

(a) Show the code and the name of the athletes who never attended any Super G competitions (`CType = 'Super G'`).

(b) For each Italian or Spanish athlete who attended at least 10 Super G competitions, show the code of the athlete, the name, the total number of attended competitions, and the best ranking position achieved by the athlete.

