SW N°2: SQL

Exercise 1: Let consider the following relationships:

STATION (StationName, capacity, location, region, price)

ACTIVITY (StationName, label, price)

CUSTOMER (id, lastName, firstName, city, region, balance)

STAY (ClientID, StationName, Start, nbPlaces)

Examples of occurrences:

StationName	Capacity	Location	Region	Price
Venusa	350	Guadeloupe	Antilles	1200
Farniante	200	Seychelles	Océan Indien	1500
Santalba	150	Martninique	Antilles	2000
Passac	400	alpes	Europe	1000

Station table

StationName	Label	Price
Vertusa	voile	150
Venusa	Plongée	120
Farniente	Plongée	130
Passac	Ski	200
Passac	Piscine	20
santalba	Kayac	50

Activity table

Id	lastName	firstName	city	Region	balance
10	Fogg	Phileas	Londres	Europe	12465
20	Pascal	Blaise	Paris	Europe	6763
30	Kerouac	Jack	New York	Amérique	9812

Client table

IdClient	Station	Start	nbPlaces
10	Passac	1998-07-01	2
30	Santalba	1996-08-14	5
20	Santalba	1998-08-03	4
30	Passac	1998-08-15	3
30	Venusa	1998-08-03	3
20	Venusa	1998-08-03	6
30	Farniente	1999-06-24	5
10	Farniente	1998-09-05	3

Stay table

Express the following queries in SQL:

1. Extract from the database the name of all the stations located in the Antilles
2. Display the name of customers living in Paris, the resorts where they stayed with the date, and finally the weekly rate for each resort.
3. Give the pairs of stations located in the same region.

4. Give all region names in the table.
5. Give the regions where both customers and stations can be found.
6. Which regions have stations but no customers?
7. Where (resort, location) cannot you go skiing?
8. In which resort do you practice an activity at the same price as in Santalba?
9. What are the resorts where diving and sailing are practiced?
10. Show the names of guests who have stayed at all resorts in their area.
11. Give the names of clients who only stay in the Antilles.
12. Give the names of the activities which are only practiced in all stations in Europe.
13. Which station charges the highest price?
14. Show regions with number of stations.
15. We would like to consult the number of places reserved, per customer.
16. We would like to consult the number of places reserved, per customer, for customers who have reserved more than 10 places.

Exercise 2 :

We consider the schema of the following database:

FILM (numf, title, genre, year, duration, budget, director, real salary)

DISTRIBUTION (#numf, #numa, role, salary)

PERSON (nump, first name, last name, datenaiss)

ACTOR (numa, agent, specialty, height, weight)

The DIRECTOR attribute of the FILM relationship is the identifier of a PERSON. It is the same for the NUMA and AGENT attributes of the ACTOR relationship.

Give the SQL queries to answer the following questions:

1. Find the list of all films
2. Find the list of films whose length exceeds 180 min.
3. List all film genres.
4. Give the number of films by genre.
5. Find the title(s) and year(s) of the longest film(s).
6. Give the first and last name of the directors who have starred in at least one of their own films
7. What is the total salary of the actors in the film “JOKER”.
8. For each “Steven Spielberg” film (title, year), give the total salaries of the actors