DataBases
TUTORIAL 4
Algebraic Language

Exercise 1:

Consider the following relational schema:

CITY (NAMECITY, COUNTRY)
CIRCUITS (NUMC, CITYDEP, CITYARR, PRICE)
MONUMENTS (NAMEM, NAMECITY, PRICE)
STAGES (NUMC, RANK, NAMECITY, NBDAYS)
SCHEDULING (NUMC, DATEDEP, NBPLACES)
RESERVATIONS (NUMR, NAMECUST, NUMC, DATEDEP, NBRES)

Write the following requests in algebraic language allowing to give:

1. The number, the cities of departure and arrival of the circuits which start after January 1, 2022.
2. Give the country and the names of the stopover towns of the circuit number "123"
3. The names of the customers who have reserved at least one circuit which passes through Tunis.
4. The names of customers who do not visit "Les Ruines Romaines".
5. The names of customers who have visited all Algerian cities.
6. The names of the cities visited by Khaldoun and Mabrouk.
7. Customers who have booked a circuit that passes through Algiers as the third stop.
8. Give the numbers of the circuits programmed but not reserved.
9. Give customers who have never visited Oran and Blida.
10. The names of customers who have only visited all Algerian cities.

Exercise 2: Tennis Tournament

Consider a database describing international tennis tournaments
Player (PlayerName, Firstname, Age, Nationality)
Match (WinnerName, LoserName, TournamentPlace, Date,Score)
Gain (PlayerName, TournamentPlace, Date, bonus, SponsorName)
Sponsor (SponsorName, Address, turnover).

Score = number of sets won

1. Who are the players of Spanish nationality.
2. What is the age of the players winning the matches played at Roland Garros on June 30, 2018.
3. What are the names of the players who have not won any match against NADAL
4. What are the names of sponsors who only sponsor the NADAL player's matches?
5. What are the names of the sponsors who only sponsor all the matches of the player NADAL.
6. Give the names of the players whose matches are all sponsored by NIKE