**Solution learning activity 07**

**Is about:**

* **NBA** database **.**

**Goals:**

* Edit and execute SELECT statements on table joins using INNER JOIN.
* Edit and execute SELECT statements on Cartesian product combinations.
* Compare the execution of instructions with Cartesian product or with INNER JOIN.
* Establish selection conditions on queries applied to table combinations.

**Exercises**

1.- Obtain season, name, team name and points per game of all NBA players of Spanish origin.

**SELECT season,name,team\_name,points\_per\_game FROM players INNER JOIN statistics ON code = player WHERE origin = "Spain";**

2.- Obtain all possible matches between teams in the Pacific division (the visiting team and the local team cannot be the same) using Cartesian product.

**SELECT a.Local AS Name,b.Visitor AS Name FROM AS teams a,AS teams b WHERE a.Division = 'Pacific' AND b.Division = 'Pacific' AND a.Name!=b.Name;**

3.- Get the names, season and points per game of the 5 players in the Pacific division who have scored the most points per game.

**SELECT players.name,season,points\_per\_game FROM (players INNER JOIN teams ON teams.Name = players.team\_name) INNER JOIN stats ON code = player WHERE Division = 'Pacific' ORDER BY points\_per\_game DESC LIMIT 5;**

4.- Get the name, season, team and statistics of the Knicks players from the 07/08 season ordered by points per game.

**SELECT players.name,season,team\_name,stats.\* FROM players INNER JOIN stats ON code = player WHERE season='07/08' AND team\_name='Knicks' ORDER BY points\_per\_game DESC;**

5.- Who is the player who has given the most assists on a California team? (Hint: California cities with teams: Sacramento, Los Angeles and Golden State)

**SELECT players.name,season,assists\_per\_game,Team\_name FROM (players INNER JOIN teams ON teams.Name = players.team\_name) INNER JOIN statistics ON code = player WHERE City = 'Sacramento' OR City = 'Los Angeles' OR City = 'Golden State' ORDER BY assists\_per\_game DESC LIMIT 1;**

6.- Obtain the home team, the visiting team, local points, visiting points and season of the confrontations between teams in the Central division.

**SELECT home\_team,visiting\_team,home\_points,visitor\_points,season FROM (matches INNER JOIN teams AS home ON home\_team = home.name) INNER JOIN teams AS away ON away\_team = visitor.name WHERE home.division = 'Central' AND visitor.division = ' Central';**

7.- From which city is the team that has scored the most points at home (there are many tied)? And the least?

**SELECT home\_points,home\_team,city FROM teams INNER JOIN matches ON home\_team = name ORDER BY home\_points DESC limit 1;**

**SELECT home\_points,home\_team,city FROM teams INNER JOIN matches ON home\_team = name ORDER BY home\_points ASC limit 1;**

8.- Get the team and city of the player with the most rebounds in the Eastern Conference.

**SELECT players.Name,Team\_Name,City,Rebounds\_per\_game FROM (statistics INNER JOIN players ON player = code) INNER JOIN teams ON Team\_name = teams.Name WHERE Conference = 'East' ORDER BY Rebounds\_per\_game DESC LIMIT 10;**

**Another way to do it with subqueries**

SELECT players.Name,Team\_name,City,Rebounds\_per\_game

FROM (statistics INNER JOIN players ON player = code)

INNER JOIN teams ON team\_name = teams.Name

WHERE Conference = 'East' AND

Rebounds\_per\_game = (select max(Rebounds\_per\_game) from statistics);