UC Riverside

CS 166 : Database Management

Quiz 1

Name:_____ Student ID: _____

The next five questions are based on the following tables:

ssn	name	firmName	firmLoc
111-11-1111	Bob Loblaw	Dewey, Cheatham, and Howe	Boston
222-22-2222	Ally McBeal	Payne and Feares	Los Angeles
222-22-3333	Maury Levy	Baker and Launder	Baltimore
333-44-5555	Saul Goodman	Recht and Greef	Albuquerque
555-55-6666	Atticus Finch	Baker and Launder	Baltimore

(a) Lawyers(ssn:string, name:string, firmName:string, firmLoc:string)

firmName	firmLoc	employees
Dewey, Cheatham, and Howe	Boston	72
Dewey, Cheatham, and Howe	San Francisco	95
Payne and Feares	Los Angeles	55
Recht and Greef	Albuquerque	120
Pope and Gentile	Milwaukee	100
Boring and Leach	Los Angeles	66

(b) Firms(firmName:string, firmLoc:string, employees:integer)

1. A natural join between Lawyers and Firms returns concatenated records with which condition?
   (a) Lawyers.firmName = Firms.firmName
   (b) Lawyers.firmLoc = Firms.firmLoc
   (c) Lawyers.firmName = Firms.firmName AND Lawyers.firmLoc = Firms.firmLoc
   (d) Lawyers.firmName = Firms.firmName OR Lawyers.firmLoc = Firms.firmLoc

2. A left outer natural join between Lawyers and Firms will return how many records?
   (a) 3
   (b) 4
   (c) 5
   (d) 6

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3. Joining Lawyers to itself on firmLoc will return how many records?
   (a) 5
   (b) 6
   (c) 7
   (d) 8
   (e) 25

4. Which of the following would find the number of employees that work at law firms employing lawyers with names starting with B?

   (a) SELECT F.employees
   FROM Lawyers L, Firms F
   WHERE L.firmName=F.firmName AND L.firmLoc=F.firmLoc AND L.name=B*;

   (b) SELECT F.employees
   FROM Lawyers L, Firms F
   WHERE L.firmName=F.firmName AND L.name=B*;

   (c) SELECT F.employees
   FROM Lawyers L, Firms F
   WHERE L.firmName=F.firmName AND L.firmLoc=F.firmLoc AND L.name LIKE B%;

   (d) SELECT F.employees
   FROM Lawyers L, Firms F
   WHERE L.firmName=F.firmName AND L.name LIKE B%;

5. Write an SQL query that gives us the name and ssm of employees.
   SELECT L.Name, L.ssn
   FROM Lawyers L;

6. Write an SQL query that gives us the name and location of the firm with more than 60 employees.
   SELECT F.firmName, F.firmLoc
   FROM Firms F
   WHERE F.employees > 60;

7. Write an SQL query that returns the number of total employees per firm (regardless of location).
   SELECT F.firmName, SUM (employees) AS totalEmployees
   FROM Firms F
   GROUP BY F.firmName ;

8. Write an SQL query that returns the number of total employees per firm (regardless of location) for firms that employ more than 100 employees.
   SELECT F.firmName, SUM (employees) AS totalEmployees
   FROM Firms F
   GROUP BY F.firmName
   HAVING totalEmployees > 100;