Database Systems

CMPT 308

Lab 5: SQL Queries - The Joins Three-quel - 20 points

Goals

Write some very interesting SQL queries and work a little harder for the lab points.

Before you begin

Check that your instance of our beloved CAP database is **exactly** the same as mine in the script on our class web site.

Instructions

Use CAP to write queries that answer all of these questions. For each question, first write the SQL query yourself and validate your answer against the CAP database as shown on our web site. Then use an AI to generate the SQL and run that. Compare your answer to the results from the AI-generated query and grade the AI's output.

1. Show all the People data (and only people data) for people who are customers. Use joins this time; no subqueries.
2. Show all the People data (and only the people data) for people who are agents. Use joins this time; no subqueries.
3. Show all People and Agent data for people who are **both** customers **and** agents. Use joins this time; no subqueries.
4. Show the first name of customers who have never placed an order. Use subqueries.
5. Show the first name of customers who have never placed an order. Use one inner and one outer join.
6. Show the id and commission percent of Agents who booked an order for the Customer whose id is 007, sorted by commission percent from high to low. Use joins; no subqueries.
7. Show the last name, home city, and commission percent of Agents who booked an order for the customer whose id is 001, sorted by commission percent from high to low. Use joins.
8. Show the last name and home city of agents who live in a city that makes the fewest different kinds of products. (Hint: Use *count*, *group by*, and *having* on the Products table in a subquery.)
9. Show the name and id of all Products ordered through any Agent who booked at least one order for a Customer in Oyster Bay, sorted by product name from A to Z. You can use joins or subqueries. Better yet, impress me by doing it both ways.
10. Show the first and last name of customers and agents living in the same city, along with the name of their shared city. (Living in a city with yourself does not count, so exclude those from your results.)

Advice

Test. A lot. Really. Then Push your work to your GitHub repository early and often. Be sure to write fun and meaningful commit messages.

Resources

- Chapters 6.1 - 6.4 in our text, especially 6.3.6 through 6.3.8 and 6.4
- SQL tag at Stack Overflow - http://stackoverflow.com/questions/tagged/sql

Submitting

Submit your work as a text file with a *.sql* extension. Or write it up in Markdown; that's cool too. Push your work to your GitHub repository **before** the due date (see syllabus).