

CompSci 316: Intro to Databases

HW-1: Simple SQL

Score: 5 * 20 (+ 20 extra credit)

Release Date: Tue, 01/14/2020

Due Date: **Tue, 01/21/2020, 11:59 pm**

Please check collaboration and late submission policy from the course website.

Description

Consider a database “beers” containing information about bars, beers, and drinkers.

drinker(name, address)

bar(name, address)

beer(name, brewer)

frequents(drinker, bar, times_a_week)

likes(drinker, beer)

serves(bar, beer, price)

Write a single SQL query for each of the following questions -- use simple SELECT-FROM-WHERE syntax covered in class (i.e., DO NOT use aggregates, GROUP BY or HAVING, built-in functions, or subqueries). The semicolon at the end of a SQL query is not required.

Questions

1. Find names of bars that serve ‘Corona’. [Output format: a single column named ‘bar’]
2. Find names of bars that serve beers brewed by ‘Grupo Modelo’. [Output format: a single column named ‘bar’]
3. Find pairs of different drinkers who like the same beer. [Output format: three columns named in the order as ‘drinker1’, ‘drinker2’, and ‘beer’. drinker1 should be the lexicographically smaller one. i.e. don't give results like (Ben, Amy, X) but (Amy, Ben, X) instead]
4. Find names and addresses of drinkers who visit at least two bars. Remove duplicates. [Output format: two columns named in the order as ‘name’ and ‘address’]

5. For drinkers who visit some bar less than 2 times a week, find the drinker's name, the bar's name and the bar's address (in that order) [Output format: three columns named as 'name', 'bar', 'address' in this order]
6. **(extra credit)** Find bars that do not serve a beer at the highest price. Remove duplicates. [Output format: a single column named 'bar']
(For each bar in your answer, there should be a beer served by the bar, which is served by a different bar at a higher price.)

How to test your answer on a small database

Find the online SQL tester from the course webpage and try your queries there. For example, [pgweb](#) (if you don't know how to connect the database, check this link: [pgweb instruction](#))

Submission Instructions

Submit your solutions on Gradescope by uploading one file for each question. Name the files 1.txt, 2.txt, etc. Each file is a plain text file and only contains the SQL query as the answer. Make sure the filename matches your answer.

If you received any help or collaborate with others, please submit **one more file as collaboration.txt** together with your solutions and put collaborators' names and types of collaborations there.

Your submission will be auto-graded. The order of output rows does not matter but please make sure **the columns are in the correct order**. Multiple re-submissions are allowed.