

CS217 HW 2 -- SQL

In this assignment, you will be asked to write 10 SQL queries: 5 on `SchoolScheduling.sqlite` and 5 on `SalesOrders.sqlite`.

Instruction

Step 1: Create a folder and name it as `hw2_yourNetid`. For example, if your netid is `abc1234`, your folder name should be `hw2_abc1234`.

Step 2: Put the attached py file `hw2.py` and the two database files in the folder. The database files can be found on canvas in the "Files" section.

Step 3: To answer the questions in this assignment, you can construct the queries in the SQLite Studio first and then copy your code as a string in the appropriate location provided in the py file.

Step 4: After you finish all the questions, please make sure you can execute the py file and obtain results for each of the query. The output format of query in python are in tuples, which is fine. The content should be the same as in SQLite Studio.

Step 5: For submission, package your folder as a zip file. For example, if your netid is `abc1234`, your submission should be `hw2_abc1234.zip`.

After unzipping your submission, the directory structure should look like the following.

```
hw2_netid/  
hw2_netid/hw2.py  
hw2_netid/SchoolScheduling.sqlite  
hw2_netid/SalesOrders.sqlite
```

Questions

You should write one single query to answer each of the question. You should not hard code intermediate results in your query. For example, in question 1, we are asking for students majoring in Music or Art. You should not read `MajorID` manually from the database.

SchoolScheduling.sqlite

Q1. Which students are majoring in Music or Art? Print their names with last names in alphabetic order.

Q2. What is the percentage of students with majors in English or Mathematics?

Q3. How many faculties teach at least one class?

Q4. Each staff member has a proficiency rating for a number of subjects. For each staff member we can calculate its average proficiency rating (average across all subjects they teach). What is the average proficiency rating of Liz Keyser?

Q5. In the Staff table, which last names have a length longer than 9 characters?

SalesOrders.sqlite

Q6. How many customers live in TX?

Q7. How many orders were sold by employee Mary Thompson?

Q8. What is the total revenue that a customer named Alaina Hallmark has brought through product sales? Here we are asking for gross revenue so wholesale costs are ignored.

Q9. What states have vendors that provide supplies for product “Cosmic Elite Road Warrior Wheels”? Print the state names in two-letter abbreviation.

Q10. In which state do most customers live? Report both the state name and the number of customers living in that state.