

CSCI 392 – SQL and Relational Algebra Homework Part 2

Part 1 – SQL Queries

Complete these exercises by writing SQL queries and executing them. Store your queries in a file, and denote the beginning of each question using comments (e.g. `/* Question 1 */`). Be sure that the solutions are listed in order, or you will be marked down.

1. Display the stage first name and stage last name for actors who were in both *Aladdin* and *Patch Adams*; display the list in alphabetical order by last name; if last names are the same, use first name.

There are **two** actors who were in both movies, **Richard Kiley** and **Robin Williams**.

2. Display the stage name and birth location for actors who were born in a city in which at least one (possibly different) actor died. You can restrict comparisons to cities only; the database is too slow when attempting to ensure that the state is the same as well.

There are 12,563 actors in the results. If ordered by StageLastName, StageFirstName, the first is our friend **Shaggy 2 Dope**, born in **Detroit, MI**; the last is **Elsa Zylbertstein**, born in **Paris**.

3. Find all actors who appeared in **at least 2** movies directed by *Steven Spielberg*, with the actor appearing the most times listed first. Note the format of the Director column in the Movies table is *Last, First*.

There are 42 rows in the result. The actor appearing the most times, somewhat surprisingly, is **Steven Spielberg**, with **4** appearances. The last alphabetically is **Robert 'Bobby Z' Zajonc**, with **2** appearances.

The tables for question 4 do not exist. Create them in your database and fill them with data that will help you debug your queries.

4. Question 3.16 from the textbook (parts b-d)

Since I don't have data for this one, I can't tell you what your results should look like.

Upload your query file to Moodle when you have completed it.

Part 2 – Relational Algebra

Complete these questions on paper and turn them in during class on the due date.

1. Write a relational algebra expression whose result is a relation containing the StageFirstName and StageLastName of any actor who appeared in a movie made in 2001 for which at least one of the genres was "Sci-Fi".
2. Use an aggregate function to find the title and year of the **first** movie that Kevin Bacon appeared in (you may assume for this question that the Year attribute actually contains the release date of the movie; in other words, there will be a movie whose Year is the smallest). Do not look up the Year and use it as a literal value in your query.
3. Repeat question 2, but without using an aggregate function.
4. Find movies with the genre of Romance (not necessarily primary) in which Julia Roberts appeared but Richard Gere did not.

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5. Find the title of movie with the largest cast in which both Kevin Bacon and John Candy appeared.