

CAS CS 660: Grad. Intro to Database Systems Data-intensive Systems and Computing Lab Department of Computer Science College of Arts and Sciences, Boston University http://bu-disc.github.io/CS660/



CS660 Fall 2023 – Written Assignment 1

Title: SQL

Suppose you are given the following relational schema for a sample movies

database:

MotionPicture (<u>id</u>, name, rating, production, budget) User (<u>email</u>, name, age) Likes (<u>uemail, mpid</u>) Movie (<u>mpid</u>, boxoffice_collection) Series (<u>mpid</u>, season_count) People (<u>id</u>, name, nationality, dob, gender) Role (<u>mpid</u>, pid, role_name) Award (<u>mpid</u>, pid, award name, award year) Genre (<u>mpid</u>, genre_name) Location(<u>mpid</u>, zip, city, country)

Note: Primary keys are <u>underlined</u> and foreign keys are in <u>blue</u>.

Task 1:

Write CREATE TABLE... statements for each of the tables above.

Task 2:

Answer the following SQL Queries:

- List movies part of the "Avengers" franchise (eg., Avengers, Avengers Age of Ultron, etc.). The result should include the movie name, rating, production and budget.
- 2. List all distinct motion pictures shot in "France".
- 3. Find all people who have received more than 2 awards for a single motion picture in the same year. List the person name, motion picture name, award year and award count.
- 4. Find the youngest and oldest actors to win at least one award. List the actor names, their age (at the time they received the award). The age should be computed from the person's date of birth to the award winning year only.
- Find American produces who had a box office collection of more than or equal to \$20 Million and less than \$200 Million. List the produces name, movie name, box office collection and budget.



CAS CS 660: Grad. Intro to Database Systems Data-intensive Systems and Computing Lab Department of Computer Science College of Arts and Sciences, Boston University http://bu-disc.github.io/CS660/



- Find the top-two rated thriller movies that were shot exclusively in Boston. List the movie names and their ratings.
- 7. Find all the movies with more than 100 likes by users of age less than 25 years of age. List the mobie names and the number of likes by those age-group users.
- 8. Find actors who have played a role in both "Marvel" and "Warner Bros" productions. List the actor names and their corresponding motion picture names.
- 9. Find the motion pictures that have a higher rating than the average rating of all comedy motion pictures. Show the names and ratings in descending order of ratings.
- 10. Find the top 5 movies with the highest number of people playing a role in that movie. Show the movie name, people count and role count for the movies.